Volume IX, No. 5 66. May, 1933

SOAP

with which is included an

Insecticide & Disinfectant Section

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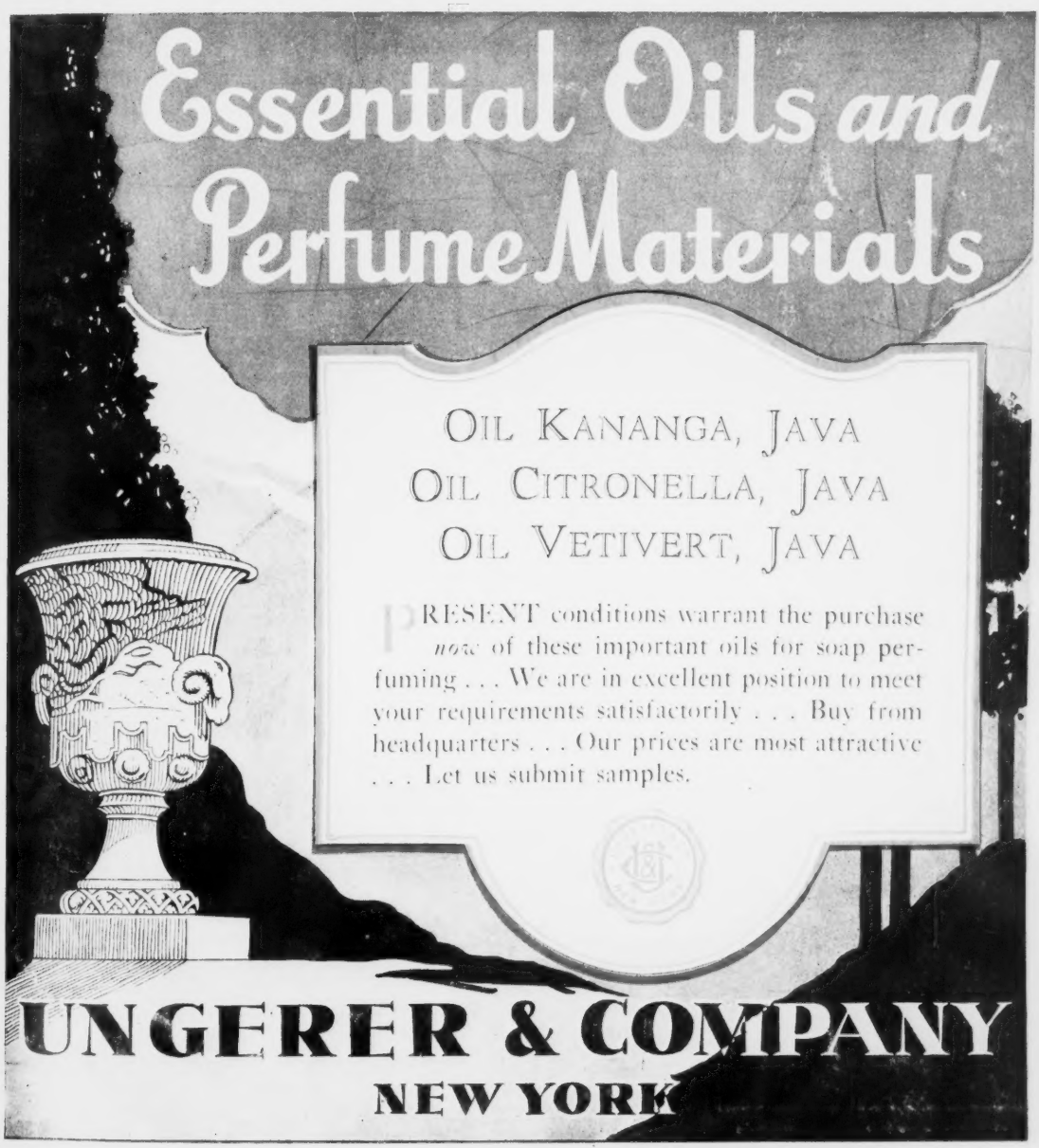
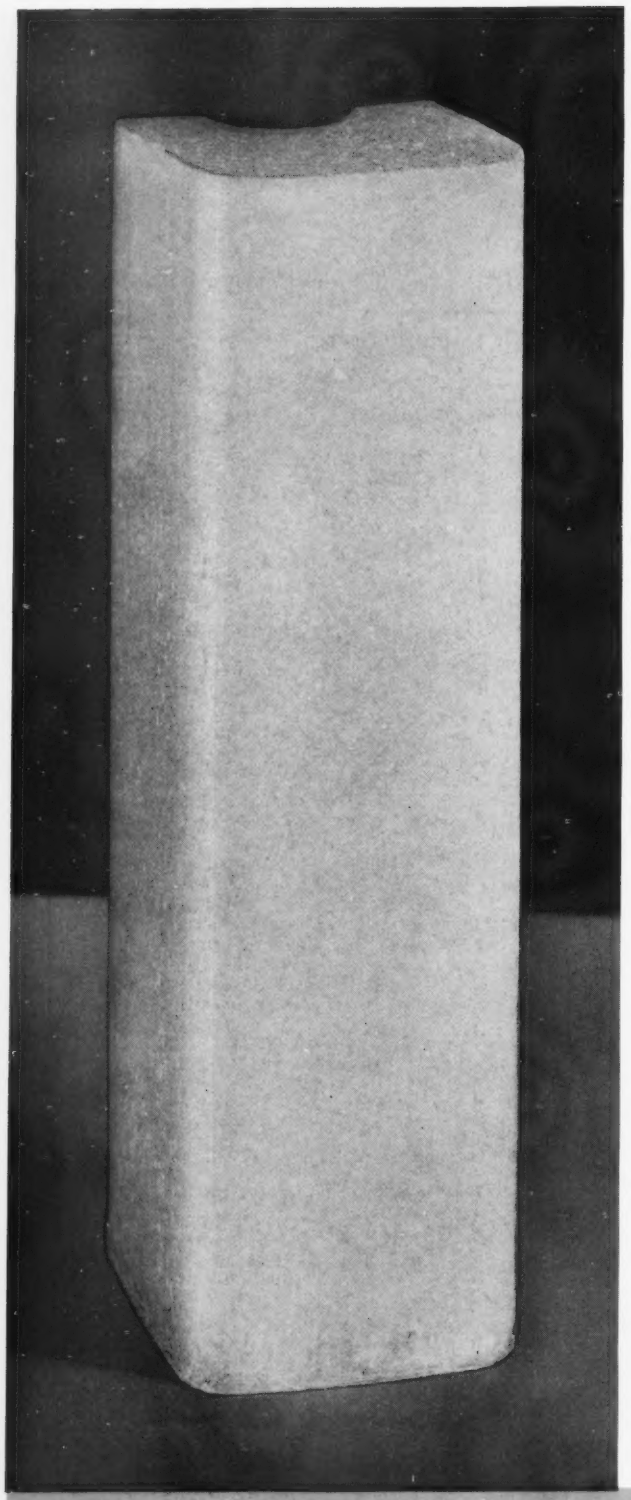

Essential Oils and Perfume Materials
OIL KANANGA, JAVA
OIL CITRONELLA, JAVA
OIL VETIVERT, JAVA
PRESENT conditions warrant the purchase *now* of these important oils for soap perfuming . . . We are in excellent position to meet your requirements satisfactorily . . . Buy from headquarters . . . Our prices are most attractive . . . Let us submit samples.
UNGERER & COMPANY
NEW YORK

RELY on This Deodorant Bloc . . .



THIS is a full-size unretouched photograph of a Falcon Deodorant Bloc. Examine it closely.

Note its smooth texture—resulting from careful laboratory control. Note too its firm outline—evidence that it is well compressed; for this bloc was carried in a sample case many days before the photograph was taken. This means that it does not crumble and so lose its air-purifying value.

If you could but smell the original bloc, you would know that Falcon Blocs are made with the finest grade of perfumes—perfumes whose pleasing odors *LAST*. And our original process of molding this bloc—cold—under tons of crushing pressure gives it compactness. That is why Falcon Blocs evaporate slowly and uniformly and remain solid and compact until the last particle has disappeared.

This bloc was made by the Eagle Soap Corporation and its manufacture is subject to the same exacting laboratory control as Eagle gives to its soaps, insecticides and other sanitation products—products accepted and used in buildings the nation over. Hence this bloc can be *relied* upon. Its Compactness, Deodorizing Value and Long Life are assured.

Supply your customers with Falcon Blocs, they cost no more than the ordinary kind. Write for prices.

Falcon Deodorant Blocs are individually wrapped in cellophane and packed 6 blocs in an air-tight tin —a year's supply for one fixture. Durable wall-type fixtures are furnished to bloc users at cost. Falcon Blocs are 7¼″ x 2¼″ x 2¼″ and weigh 25 ounces. Choice of odors—Cedar, Lilac, Rose.

FALCON BLOCKETTES and PERFUMED CRYSTALS

Falcon Blockettes keep toilets free from unpleasant odors. Insoluble in water, they may be placed directly in urinals. The odors—Cedar, Lilac or Rose are pleasant and lasting. Twelve 4 oz. blockettes wrapped in cellophane are packed in fibre tubes, 12 to the case.

Falcon Perfumed Crystals quickly free rooms of stale smoke odors, etc. Put up in handy, easy to use 16 oz. shaker top cans. Choice of odors: Cedar, Lilac, Rose.

EAGLE SOAP CORPORATION • 25 EAST JACKSON BOULEVARD • CHICAGO

Oil Citronella is higher

Standardize cost and save with

ANDRO, MM&R

An efficient and economical substitute!

With oil citronella much higher in price and with little or no stability to the market, the wisdom of standardizing on an efficient substitute is quite apparent. In Andro, MM&R we offer an excellent product to accomplish this purpose. It is low in cost and, of even greater importance, the price does not fluctuate. This new and excellent product presents the characters midway between Oil Citronella Ceylon and the Java variety. It is equal in pungency to the best citronella oil, light in color, uniform in quality and strength, almost water white and without the tendency to darken in your finished soaps, sprays or other products.

It will pay you to investigate this new MM&R Specialty!

The 1933 Spray Perfume
KEROSPRAY
BOUQUET No. 804
Have you tried it?

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They remove chance from formulae—make laboratory control a sure thing

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These du Pont Crystals will not discolor and are absolutely stable. They are an excellent fixative. And embody the clear, fresh odor note of the rose in a pure white crystalline form. Yet with all these outstanding features, Benzophenone Crystals are priced well within the cost range of any toilet or liquid soap formulae. They are characterized by their high boiling point.

GERANIOL EXTRA

The uniformity, freedom from any sharp by-odors and its delicate rose-like odor are the distinguishing features of this du Pont Aromatic. And the most highly skilled technical direction and improved processes of manufacture insure its chemical purity.

CITRAL

It is water-white and free from Methyl Heptenone. And like other du Pont Aromatics added refinement in its manufacture plus complete laboratory control adds value to *your* product.

HAVE COMPLETE LABORATORY CONTROL OF YOUR FORMULAE—USE DU PONT AROMATICS. MAIL COUPON FOR SAMPLES

DU PONT

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ORGANIC CHEMICALS DEPARTMENT
Fine Chemicals Division
WILMINGTON, DEL.
SOLE DISTRIBUTORS FOR Société Usines Chimiques, Rhône—Poulenc, France

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Organic Chemicals Department
Fine Chemicals Division, Wilmington, Del.
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_____ I want to test them for myself. It is understood this does not obligate me in any way.
*Name*_____
*Address*_____
*City*_____ *State*_____

SOAP

Reg. U. S. Patent Office

Volume IX
Number 5

May, 1933

INSECTICIDE and Disinfectant Section, which is included as a department of every issue of SOAP, begins on page 67. Oil, Fat & Soap Production Section begins on page 55. These sections contain news, articles and editorial opinion of particular interest to their respective industries.

IRA P. MACNAIR
Editor

DR. FOSTER D. SNELL
Consulting Technical Editor

GRANT A. DORLAND
Business Manager

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MUCH MORE THAN *Price*

OF COURSE you want economy in the packaging of your product. But economy in closures isn't all a question of price. ♦ Closures that are difficult to apply—closures that do not seal perfectly—liners that deteriorate in use—closures that are difficult for consumers to remove—closures that detract from the appearance of your package—can prove costly, no matter what you pay for them. ♦ Here at C. C. & S. we have carefully built up a 7 Point Service to help you in obtaining the right closure for your product. It is a service that considers much more than price. For only by providing closures that are right from every angle—closures that fulfill every requirement throughout the life of your particular package—can we give you closures that are most economical for you. ♦ Why not find out the real meaning of 7 Point Closure Service and the true economy it offers in the sealing of your product? A phone call, wire or letter will bring you full particulars.

➤ EFFECTIVE SEALING ➤ SUITABILITY FOR PRODUCT ➤ EASY APPLICATION ➤ EASY REMOVAL ➤ BEAUTIFUL DECORATIONS ➤ DEPENDABLE SUPPLY ➤ NATION WIDE SERVICE

TO OBTAIN THE RIGHT CLOSURE FOR YOUR PRODUCT

CROWN CORK & SEAL CO. Baltimore Md.

WORLD'S LARGEST MAKERS OF CLOSURES FOR GLASS CONTAINERS

It's all in the **CAP**

QUALITY SANITARY SPECIALTIES

Make Auto Polishing A Joy

with NOPCO 1669 polish

The ease with which Nopco 1669 auto polish can be applied and the certainty of results produced, brings a joy to every user. Easily applied over the entire surface of the car in one operation. Nopco 1669 auto polish does a thorough cleaning job, resulting in a glistening, high lustre. A popular auto polish which will be much in demand this spring. Economical, too.

FURNITURE POLISH

Nopco 1716-AL-2

An improved furniture polish that actually cleans as it polishes. It adds a rich, lustrous film and leaves no trace of oiliness or greasiness. Easy to apply and economical. A popular seller.

PINE OIL BASE

Nopco Albasol AR

An excellent base for making soluble pine oils for spraying disinfecting, and insecticide purposes.

RUBLESS FLOOR WAX

Nopco 1725

A liquid rubless floor wax that dries to a lustrous durable film. Its water resistant properties compare favorably with solvent wax solutions. A stable emulsion.

LIQUID SOAP BASE

Nopco Kokobase

A high grade concentrated coconut oil potash soap. Used extensively for making perfumed liquid soaps and shampoos.

NOPCO quality products are always uniform and of unvarying high standards. This means complete satisfaction to ultimate consumer. Write for complete information regarding our products in which you are interested.

NOPCO

NATIONAL OIL PRODUCTS COMPANY

Boston Chicago **HARRISON, N. J.** Hamburg, Germany San Francisco

Do *you* want a *Partner*?

If your present sales and profits are entirely satisfactory to you, then this offer may not be of interest.

On the other hand, if you can stand more business NOW, here is a suggestion that actually works and has proven itself again and again.

Just add a few suitable long profit products to your line that you can sell to your present customers *without going to the bother and expense of investing in machinery, stocks of raw materials, labels,* etc.

We will take care of all that for you,—and supply you with high grade finished products at prices so low that it would scarcely pay you to make them up yourself.

In addition, we have attractive imprint labels ready for your name and address.

OUR HALF	YOUR HALF
Making up for you high grade finished products at minimum cost.	Selling a few extra profitable items to your present trade and watching your sales jump.

There are some concerns who are actually *making more money today than ever before.* Clifton Products can aid you, too.

CLIFTON CHEMICAL CO., INC.

CLIFTON BUILDING

246 Front Street
New York City

MEMBER NATIONAL ASSN. INSECTICIDE AND DISINFECTANT MFRS. INC. 1914

Quality Sanitary Products Since 1912

TEAR OFF HERE

CLIFTON CHEMICAL CO., INC.
246 Front Street, New York City.

Your plan is worth looking into. The items checked would probably held increase our sales. Please quote:

- ☐ Semi Castile Liquid Soap
- ☐ Liquid Soap Base
- ☐ Liquid Soap Dispensers
- ☐ Metal Polish
- ☐ Deodorizing Cakes and Blocks
- ☐ Deodorizing Block Containers
- ☐ Rub-No Wax
- ☐ Silver Polish Paste
- ☐ Liquid Floor Cleanser
- ☐ Oil Soap
- ☐ Coal Tar Disinfectant
- ☐ Pine Tree Disinfectant
- ☐ Shampoo Liquid and Base
- ☐ Shaving Cream

.....
(NAME)

.....
(ADDRESS)

ALBERT VERLEY
INCORPORATED

GERANIUM ARTIFICIAL GERANIOLS

for Soap Perfume

With the market for natural geranium oil in its present unsettled condition, the above products should be seriously considered by the soap manufacturer. Both work excellently in soap and will provide the geranium note at a cost which will be reasonable and at the same time stable. May we submit generous working samples?

PERFUME SPECIALTIES

In our laboratories, we have facilities for manufacturing a complete line of compounds for soaps of all kinds, theatre sprays, para products, polishes, fly sprays, etc. Besides our standard perfume specialties, we can make up individual odors to suit your needs. It will cost you nothing to investigate the possibilities of these products. What are your problems?

SOAP SPECIALTIES
By Tombarel, Grasse, France

Resinoids

Tombarel Freres produce a complete line of resinoids, all very interesting bodies for soap perfume. Resinoids not only give character to soap odors, but also act as fixatives.

Lavender, Absolute
Oil Vetivert
Oil Geranium

also headquarters for

RHODINOL-S
IONONE SAVON
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CHICAGO
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New York Office
114 East 25th St.
NEW YORK
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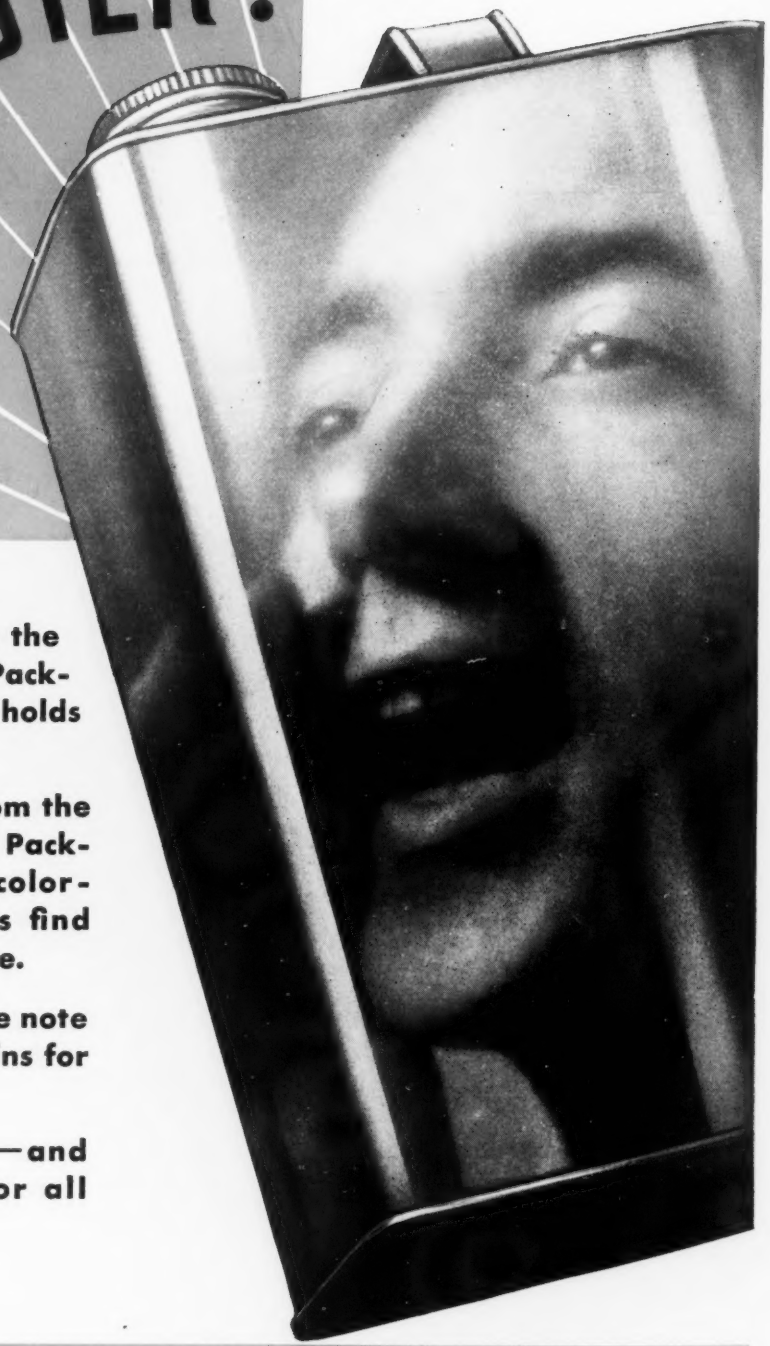
SAY • MR. BUYER!



SOUND waves from the smart, colorful Package!..the CAN that holds *your* line!

It's a "short haul" from the front line, where our Package designs and color-labelling treatments find placement in the store.

Let the CAN sound the note of Quality that remains for proof in *use* alone.

Packaging de-luxe—and just Plain Cans—for all the trade.

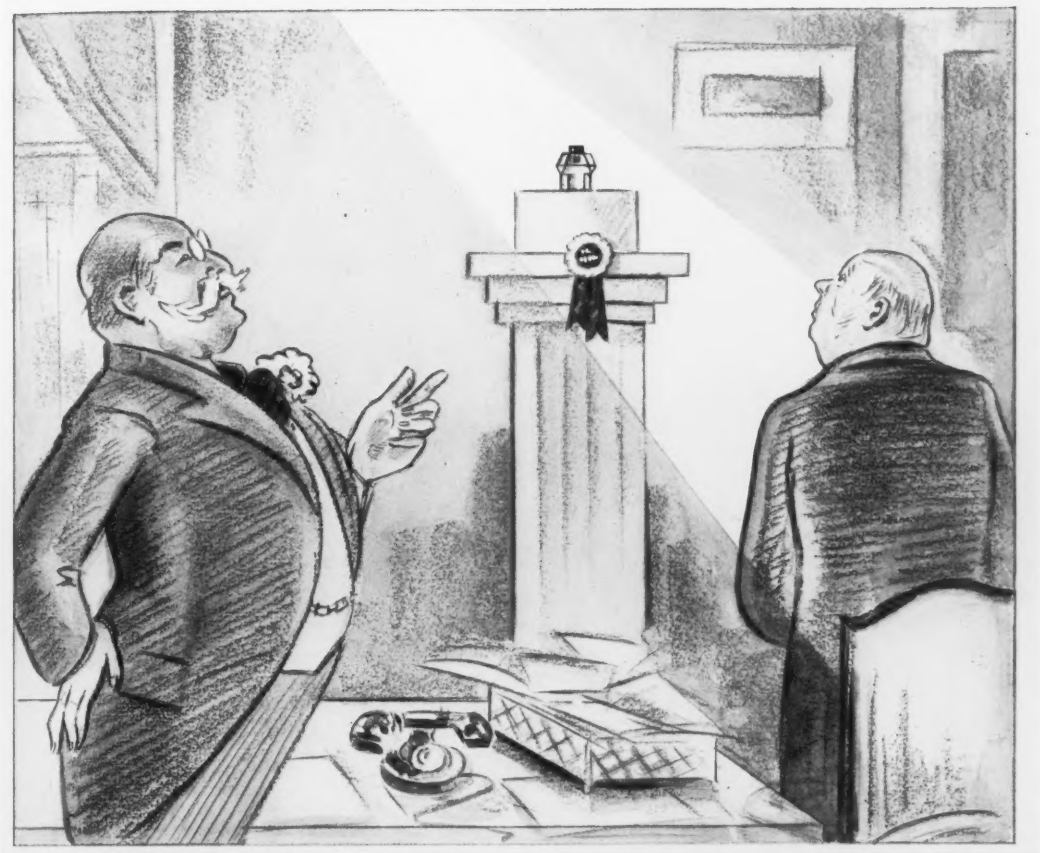
METAL PACKAGE CORPORATION

110 E. 42nd ST., NEW YORK CITY

ESTABLISHED 1909

SALES OFFICES AND PLANTS • NEW YORK CITY • BALTIMORE • BROOKLYN • CHICAGO

THE FISCHER CAN COMPANY DIVISION • HAMILTON • OHIO



"YES, SIR, ED, IT TOOK FIRST PRIZE—THE SNAPPIEST PACKAGE AT THE SHOW"

To win a prize undoubtedly is flattering. Yet, really, it's purely incidental. Nor is it any criterion of ultimate success, either.

A package should sell! That's fundamental! You've seen hundreds of packages that wouldn't stand a Chinaman's chance of winning a packaging prize…and yet you know they do the job they're supposed to do, in fine shape.

A product may even be too nicely packaged sometimes; creating such an impression of expensiveness or exclusiveness as actually to scare people away. Other times containers and accessories may be so "fancy" as to increase packaging costs out of all reason. Or an unquestionably beautiful package may be impractical for mass production.

We are not decrying prize winners, for Anchor has always advocated careful attention to design and appearance. In fact, we have assisted in the development and redesign of packages in innumerable cases. Our efforts have been away from the special and the tricky things and toward the utilization of simple and standard materials in effective and colorful combinations. Practicality is almost an obsession with us.

Frankly, the Anchor Package Design Department does not care whether a customer's package is a prize winner…so long as it's a *sales winner.*

★

ANCHOR CAP & CLOSURE CORPORATION
Long Island City, N. Y. : : Toronto, Canada
BRANCHES IN ALL PRINCIPAL CITIES

BECAUSE OF THE WAY THEY SEAL

ORDINARILY, a molded type of cap is chosen for a package because of the rich, lustrous beauty of the material itself, for its sales value as a decorative factor. But the reasons why a manufacturer selects Molded Caps *made by Anchor* are quite different. These are the more essentially practical reasons, such as sealing efficiency, adaptability to machine application, ease of removal, and convenience for the consumer.

The answer does not lie in Anchor's greater proficiency in manufacturing, or our superior ability, though we feel that Anchor possesses those, too. It is just that Anchor has been intimately concerned with sealing problems and closure requirements for more than a quarter century. Hence it is but natural that our engineers would create a more practical and efficient design. It is only to be expected that questions of sealing and of closure efficiency would receive far more attention from Anchor's organization of closure specialists.

Anchor Molded Caps give you more than merely style and smartness. They bring to the manufacturer exclusive features of design and construction—on the inside of the cap—that add materially to the creation of a satisfactory package, both for those who make and sell it, as well as for the ultimate consumer.

FEATURES OF CONSTRUCTION

- **Scientifically constructed thread gives a firm, sure grip around the entire circumference of bottle or jar.**
- **Predetermined thread length prevents jamming or interfering with proper seating of liner.**
- **Thread construction allows for variations in glassware permitted by G. C. A. standards.**
- **Liner retaining ledge and liner recess hold the liner securely in place. This prevents liners sticking to bottle tops and being discarded. The product is never left unprotected.**
- **Liner rotates freely in the liner recess as cap is applied or removed. This prevents injury to liner surface and consequent leakage or evaporation of contents.**
- **Liner retaining feature permits caps to be delivered assembled, makes unnecessary the use of oversize liners, and makes practical machine application.**
- **Wedge top construction keeps liner under tension, increases pressure on the liner at point of contact with the top of the glass container, centers cap on the container, and results in unusual sealing efficiency.**
- **In medium and tall styles, the thread is exactly the same length as in the standard bottle style, requiring minimum turning to apply or remove.**
- **Dome top construction of jar caps increases flexibility and gives a spring seal effect and greater sealing efficiency.**

Anchor

MOLDED CAPS

PASSING IN REVIEW

● Here they come! All shapes and styles of closures! Each one with a definite place in the scheme of things! And each one an Anchor product.

Why so many types? There is a sound reason for this wide variety, a reason that is important to each user of glass containers...it assures him of obtaining a closure *exactly* suited to his product, his ideas of merchandising, and his pocketbook.

★

ANCHOR CAP & CLOSURE CORPORATION

22 QUEENS STREET, LONG ISLAND CITY, N. Y.

BRANCH OFFICES

ATLANTA • BOSTON • CHICAGO • CLEVELAND • DETROIT
HOUSTON • LOS ANGELES • LOUISVILLE • MONTREAL
NEW YORK • PHILADELPHIA • PITTSBURGH • ROCHESTER
SAN FRANCISCO • ST. LOUIS • TORONTO

ASSOCIATE MEMBER

NATIONAL ASSOCIATION OF INSECTICIDE AND DISINFECTANT MFRS. INC. 1914

ASSOCIATE MEMBER

NATIONAL ASSOCIATION OF INSECTICIDE AND DISINFECTANT MFRS. INC. 1914

Above is shown OnIzed Amber Blake line—29 sizes always available in stock.

All 29 Blake sizes may be had with either screw-cap or cork finish.

Above: A group of OnIzed Containers now available in Amber Glass. Those that are not stock items may be had on special order.

AMBER GLASS

rich in color—strong in sales appeal

The popularity of *OnIzed* Blakes in Amber Glass has been so marked that we have extended the use of this beautiful color to a number of additional styles. The illustration above gives you an idea of the attractive shapes which can now be obtained in Amber Glass. Give your product a striking individuality—the distinctive beauty of these containers will set it out in strong contrast to its neighbors. Here is an opportunity for you to use this enlarged line of *OnIzed* Amber Containers and cash in on the widespread approval now given to *OnIzed* Amber Glass. Owens-Illinois Glass Company, Toledo, Ohio.

OnIzed
PHARMACEUTICAL AND PROPRIETARY WARE

1873 • SIXTIETH ANNIVERSARY • 1933

OWENS-ILLINOIS

THE FIRST, AND STILL THE FIRST

Niagara

CAUSTIC POTASH

Niagara Alkali Company was the first, in this country, to manufacture Caustic Potash. Our many years of development, experience and increasingly expert control have produced a grade of potash which is the finest obtainable here or abroad.

Caustic Potash is difficult to produce in a pure state. For a safe, consistently excellent quality, specify *Niagara.*

NIAGARA ALKALI COMPANY

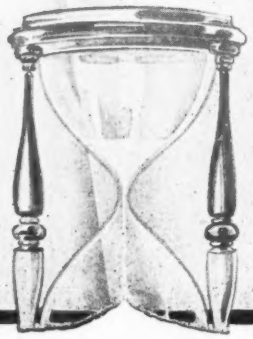
Associated with Electro Bleaching Gas Co.
Pioneer Manufacturer of Liquid Chlorine

9 East 41st Street, New York, N. Y.

"BEAMAX"
DRIES TO A LUSTRE
LIQUID
WAX
does not require polishing...
"BEAMAX" cuts floor maintenance costs by saving labor—no buffing is necessary on application, and no polishing is required.
"BEAMAX" is easily applied with a cotton mop or lamb's wool applicator. It smooths itself. It dries to a hard, lustrous finish in twenty minutes or less.
"BEAMAX" is long wearing. Finish is easily maintained by buffing; each cleaning increases the lustre. Floors can be washed with clear water without affecting the finish.
"BEAMAX" is recommended for all types of floors—this one wax takes care of linoleum, wood, tile, terrazzo, rubber, asphalt tile, mastic, etc.
"BEAMAX" will not show lap marks when used for "patching" worn spots. It has no odor.
"BEAMAX" is sold in drums, half-drums, and quarter-drums, as well as in 10-gal., 5-gal., and 1-gal. cans. It is a perfect emulsion and will not settle out.
Try "BEAMAX" for yourself. Send coupon for sample and prices.
THE DAVIES-YOUNG SOAP COMPANY
Dayton, Ohio
Copyright 1933 by The Davies-Young Soap Co.
The Davies-Young Soap Co.
Dayton, Ohio.
Please send me without charge sample can of "BEAMAX" Dries to a Lustre LIQUID WAX.
Name .....
Address .....
City .....

LEADERSHIP

THRU THE PAGES OF CHEMICAL HISTORY



Avogadro (1776-1844), the unassuming Italian, a careful thinker and a keen observer, stated the hypothesis which eventually brought order out of chaos in the adaptation of Dalton's Atomic theory to observed facts. This hypothesis seems now to be a statement of truth and is used daily in industrial chemistry.

and to-day

MONSANTO

occupies a ranking position as a supplier of basic materials to many diversified industries. For example Monsanto is a leading producer of

COUMARIN

and was the first American manufacturer. The product has been constantly improved and is preferred for its true aroma, pure white color, and excellent rate of solubility.

Monsanto Chemical Works
ST. LOUIS, U.S.A.
NEW YORK BOSTON CHICAGO SAN FRANCISCO LONDON

Other Monsanto products include Methyl Salicylate U. S. P., Phenol U. S. P., Cresylic Acid and Santochlor (Pure Paradichlorbenzene).

CHEMICALS for QUALITY
Monsanto
ST. LOUIS, U.S.A.

SOAP

Volume Nine Number Five

Soap Prices Advance

FOLLOWING the general rise in commodity markets of the past month, higher prices for fats and oils brought advances in soap prices early this month. At the same time, a number of soap makers, apparently anticipating a further upward movement in prices, refused to contract for advance soap requirements. Although the rise in soap quotations did not immediately spread to all manufacturers, it was sufficient to stiffen the general market very materially and, for the time being at least, to eliminate some price cutting. Not only were a number of the best-known national brands moved up, but some of the bulk soaps were also advanced.

The present raw material markets should make all soapers extremely cautious in their contracts. Nobody knows just what the next few months will hold in commodity price movements. The present upswing may be merely a flash in the pan, or on the other hand, it may be the beginning of a prolonged rise. Although we are inclined to doubt the latter, it is certainly the sensible thing at this time to exercise every caution in quoting prices on soaps.

—o—

The strangest legislative document which ever passed a parliamentary body in the history of the universe is the description of the so-called "Inflation Bill," according to the opinion of John B. Gordon of the Bureau of Raw Materials for the American Vegetable Oils and Fats Industries at Washington. That the bill did not involve the oils and fats industries of the country, Mr. Gordon maintains is nothing short of miraculous. After all the legislative shots which have been aimed at imported oils and fats during the past two months, we agree fully with this view.

—o—

Serious This Time?

AT LAST the toilet goods manufacturers of the country appear serious in their proposals to clean up the advertising situation and other sore spots of the business. The dominant note at the recent annual convention of the Associated Manufacturers of Toilet Articles in New York was for the elimination of vicious trade practices, including extravagant advertising claims. Included in the membership of this association are a few leading soap companies, whose problems are somewhat akin to those of the cosmetic manufacturer. This is, of course, particularly true where the soap houses also manufacture and market cosmetics.

To the end that any code of ethics covering trade practices among cosmetic manufacturers may, when required, be able to show its teeth, the Association is proceeding to confer with the Federal Trade Commission in the matter. It seems to be the desire of the Association to put its own house in order if possible, but lacking that ability, the organization apparently intends to resort to the powers of the Commission to whip the recalcitrant members of the industry into line.

For years, we have heard hidden demonstrators, fraudulent and extravagant advertising, and other practices attacked vehemently. We have seen what promised to be serious attempts to curb them dissipated by lethargic inactivity. The solution of the problem has

seemingly been taken out in arduous, but useless discussion. If we are skeptical, there can be little wonder after all these years of getting nowhere.

That the present activity of the Association looks more like serious business than previous attempts, is not to be denied. There appears to be a grim determination on the part of the leaders to carry these reforms to a finish. It is to be hoped sincerely that they will succeed. They should not lack the support of firms which are fed up with conditions as they have been for some time past.

—o—

Optimism in Soap Costs

DISCUSSING the need of a tariff on imported oils and fats, we find the following statement in a recent issue of the *National Provisioner*: "Another contention of the soapmakers is that restriction of imports will increase the price of soap, which would have to be passed on to the consumer. As a matter of fact, the cost of fats and oils is about the smallest item in the manufacture of soap. Figuring an average price today of 3½c per lb. as the value of tallow or oil used in toilet soap, it will be found that in a 4 oz. 10c bar of soap, there is only about 5⅝c worth of fat. There is a big spread between the cost of the fat and the price of the soap—in this example, exactly 9⅜c—and it does not seem unreasonable to suppose that the manufacturer could very readily absorb some additional expense in this cost of raw material without necessarily passing the item on to the consumer."

We will grant that the prices of tallow, oils and greases have been far too low for three years or more—dangerously low even from the point of view of the consumer. We have maintained that higher fat prices are necessary to bring the renderer and crusher out of chaos, and to remove the threat to the consumer of inadequacy of future supplies. We have yet to see, however, how a tariff on soap fats can accomplish anything of real or permanent value to the domestic producer. To those who are familiar with the subject, the arguments on both sides are well known.

As to the analysis of fat costs and soap prices given above, it is on its face ridiculous to compare a theoretical retail price of a finished product with the carload price of a raw material. The cost of the fat in any soap is not the smallest item in manufacture—it is indeed one of the greatest. And as for a ten cent four-ounce bar of toilet soap, we must point out that this indicates a class of soap rather than the actual selling price. No end of four-ounce "ten-cent" toilet soaps are being sold retail at three to five cents per bar. All told, this is a pretty picture of an optimistic method for figuring soap costs. It is too bad that it cannot be done in practical soap manufacture.

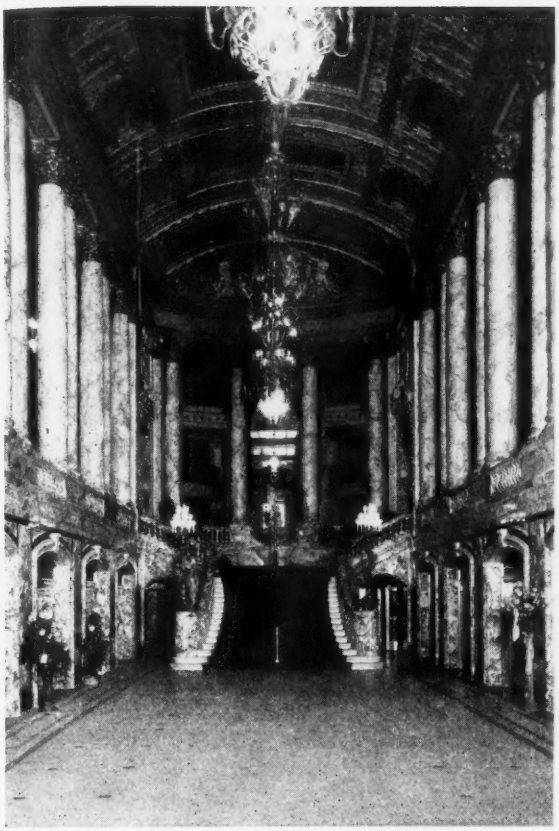
—o—

We Were Afraid of This

A NEW trade name has ventured forth to join the ever growing army that includes chipsies, thinnsies, thicksies, krispies, socksies and whatnotsies. We blushed becomingly for the soap industry when we reported the new member in our April issue—"Soapsies." The soap industry will have to yield the palm to foodstuffs manufacturers, however, Alexander Woolcott having unearthed the masterpiece "Bekus Puddy" in one of his searches for the odd and unusual in trade names. According to the makers, this name was selected by a wee tot of four (in the advertising business at such a tender age?) as yet unable to pronounce her words correctly. According to Mr. Woolcott, the poor lady who agreed to buy a package of "Bekus Puddy" for him was confined to her bed for two weeks by the shock. Let us hope that a kinder fate awaits the first buyer of a carton of "Soapsies."

—o—

From Washington, come many rumblings of impending drastic revisions in the Food and Drugs Act and the Insecticide Act. Reports that the entire acts will be rewritten have been heard. There is much of rumor regarding the whole thing, but very little of actual fact inasmuch as the officials of the Department of Agriculture, from whence the proposal to revise the law is said to emanate, are not announcing their plans. It is said that the law will embrace not only foods, drugs, cosmetics and related products, but the advertising copy of these goods. The rumors have it that the new acts will be far-reaching and equipped with full enforcement machinery. The migration to Washington to find out what it is all about has apparently been quite heavy during the past two weeks.



When a fortune in marble is involved, there can be no mistake in the selection of the cleaning agent. Lobby and grand staircase of the Paramount Theatre, New York.

The Nature of Industrial Cleansers

The Whys and Wherefores of Recommendations by Manufacturers in the Use of Cleaning Compounds, Scouring Powders, and Oil Soaps, Discussed

By L. D. GIBSON

ALTHOUGH most manufacturers are quite thoroughly familiar with the uses to which their products should be put, and also understand their limitations and are willing to admit them, there are still a few who will recommend their materials for any and all purposes. These all too broad recommendations are perhaps more common by jobbers and distributors than by makers. The ultimate consumer is consequently quite often misled and the victim of unnecessary trouble. Cleaning compounds, because of the similarity in appearance of many different types, lend themselves to sweeping claims which more often emanate from sales enthusiasm and lack of knowledge than from a deliberate attempt to mislead. The same is true of certain potash soap specialties.

On a certain job a particular cleanser may do excellent work, where on another job which from all appearances is about the same, this cleanser will fall down badly. As an instance, a soap powder is used for general cleaning. It is being used with excellent success on the wooden floors of the hallways, and is doing good work about the washrooms and toilets. Now this same powder is used on linoleum flooring and the user begins to notice what at first appear to be defects. The first impulse is to blame the linoleum as defective, and censure the manufacturer. The user may even

go to the extent of calling in the manufacturer of the linoleum, and after some rather harsh words, finally discover that the fault lies with the soap powder.

Manufacturers and jobbers will save themselves many complaints and much woe if they will give more attention to accompanying the sale of their cleaners and soaps by more specific instructions for their use. General instructions should, of course, include the recommendation of soft water, warning against the use of too much soap or detergent, advise to dampen the surface with clean, soft water before applying the cleaning solution, and finishing the job with a thorough rinsing.

The last point is particularly important and should be emphasized by manufacturers. In too many cases, little attention is paid to complete rinsing. This is especially true with the so-called water softeners or alkaline salts. Although, it is impossible to remove all the alkali under practical working conditions, it can be rinsed to a minimum which is not detrimental to the surface. Danger, however, exists with surfaces that are porous. With the continued use of alkali cleaners, there are deposited repeatedly in these pores solution of the alkaline salts. In time this may build up and cause cracking and raising of the surface or discoloration and spalling as in the case of marble. All this may likewise be the case in the use of soap, plus the fact that a slippery surface may result in addition.

IN the case of abrasive mixtures which appear on the market as scouring powders, we find a great variety of products. A scouring powder or mopping powder is probably the most efficient cleanser yet compounded. When it is scientifically designed as to size of abrasive particle, containing its proportion of soap in correct form, as likewise a proportion of alkaline salt, it gives in its action most of the common methods of cleansing procedure. From the soap content, we obtain an emulsifying action, although soap in a scouring powder to some degree acts as a lubricant. The presence of an alkaline salt gives extra "cutting" properties, and the abrasives add a scouring or mechanical effect and likewise the property of absorbing grease and dirt, acting as a vehicle for its removal, and added help to the cloth, mop or brush.

A scouring powder is of course limited to certain types of cleaning. It would be foolhardy to use it on linoleum or any highly lacquered, painted or polished surface. Attention should be paid especially to the size of abrasive particle and its uniformity by the manufacturer. Too large a particle will cause visible scratches, whereas too small a particle has little scouring value, and a considerable amount of the latter makes the rinsing and removal difficult. For general purposes, an abrasive passing a 100 mesh sieve and retained in a 300 is the most efficient.

A pure soap should be used on surfaces whose finishes are liable to be affected by the action of alkali. It is of course true that there is no such thing as a pure, neutral soap. In speaking of neutral soap, it is meant only that there is present the minimum amount of alkali needed to saponify the oil in practical soap manufacture, and no appreciable excess. Neutral soap should be recommended for lacquered surfaces, expensive and inlaid linoleum, painted surfaces, etc. Especially so is it advisable to use a neutral soap on linoleum. There is a difference of opinion as to whether the use of a neutral oil soap benefits linoleum or not. It is known that a water solution of soap, plus a little light mineral oil will penetrate, soften and preserve leather. Perhaps this is a rather lame comparison, yet

If defects appear in linoleum floorings, usually the first impulse is to blame the linoleum manufacturer. A faulty recommendation and improper use of a cleaning compound may underlie the real trouble. Alkalies and abrasives have no place on linoleum floors.

both of these products depend upon a certain percentage of oil for necessary softness and pliability, and to prevent cracking. Be that as it may, experience has found that coincident with the continued use of neutral oil soap, linoleum has enjoyed a long and well-kept life.

PERHAPS the most widely used type of cleaning compound on the market today is the ordinary soap powder. These powders average in soap content from 5% up to 50%. They are combinations of soap, soda ash, other alkaline salts and water. The water being present as water of crystallization, chemically combined with the soda ash and modified alkalies. The percentage of soda ash and other alkalies may vary considerably. By their very makeup, they contain a considerable amount of free alkali, but for all general purposes they are extremely satisfactory. Care must be taken however, not to recommend them for use indiscriminately. Their limitations are quite obvious. A powder of the following composition has been found by experience to be particularly suitable for general purposes: Soap content 10% to 20%; moisture content around 30%; the remainder being soda ash with perhaps 10% to 20% of modified soda.

There seems to be considerable contention regarding the use of oil soaps as compared to tallow or house grease soaps. There are two factors to consider: (1) That the higher the titre of oil or grease, the less soluble will be the soap, and consequently a corresponding loss of detergent action. The use of a smaller amount of soap may be suggested, but that will not give the strength of detergent needed. Then there is the case of controlling the workman actually using the soap. He is very apt to use more than will actually dissolve. In many cases complaints of trouble with drains may be pointed directly to this cause. (2) Another thing, should the soap solution scum while being applied, a high titre fatty acid would appear caky and solid, and would be more difficult to remove and more apt to discolor.

As to definite recommendations for the use of various cleaning compounds and soaps which should be made to the consumer, we suggest the following: *Pure Neutral Soaps*, (either hard or soft) for lacquered surfaces, painted surfaces, and linoleum. *Neutral Oil Soaps* specifically recommended for linoleum and highly polished marble. *Soap Powders* for all general cleaning purposes,—corridor floors, wash rooms, cleaning of utensils, as dishes, pots, pans, etc. *Scouring Powders* for walls and floorings of the following types: marble (not polished), tile, mosaic, stone, tarrazzo, kompolite, granolithic, rubber tile, travetine, all types of porcelain. *Water Softeners*—These may be used in conjunction with the other types. If used alone a considerable amount of care should be exacted in their use on account of their usual alkaline action. These act as an aid in all cases except where the neutral soaps are indicated. They are especially useful in localities that are served with hard waters.

LET us consider specifically the cleaning of marble (except highly polished and a lacquered marble). A scouring or mopping powder is probably the most efficient cleaner designed for this purpose. Care should be taken that the size of the abrasive is fine enough not to cause any visible scratching and yet not too fine as to require excessive labor in its use. In the way of a suggestion, there are types of volcanic ash that are considerably softer than the general run, and which under pressure "crunch" rather than abrade, and as a consequence lend themselves ideally to the cleansing of marble.

Another point to consider is the soap content. Too much soap is liable to impart a very slippery surface, causing no end of trouble. This is especially true when cleaning what are termed the soap stone marbles. This type of marble is of itself very slippery and consequently needs special attention as to the constituents of the cleaner used. Our Virginia stone marble is an example of this type.

In the use of soap powders on marble, a great amount of care must be exercised in rinsing, as the alkaline salts present will get into the pores and cause the marble to spall. This condition is not always visible in a short time, but it is certainly true that even the strongest and densest of marbles cannot stand this action indefinitely. Perhaps the surest way to prevent this is not to use cleaning preparations containing such salts. It is quite evident however, that they help in the cleansing. There are two procedures that should be drastically adhered to, namely, moisten the surface before applying the cleansing reagent, and be sure to rinse thoroughly.

In experience with marble, a great many conditions are encountered in the form of stains and discolorations. These conditions are not cleared up by the general cleansers on the market. They are due to a great many causes and require highly specialized treatments. We refer to the so-called "poultices."

These are mixtures of different salts, each salt having a specific use, all embodied in a paste, usually of whiting, talc, fine silica, volcanic ash, etc. As an example let us take the treatment of iron stains. For this, the following materials can be recommended: sodium citrate, glycerin, whiting, water.

The sodium citrate is dissolved in water, to which the glycerin is added. Whiting is then added until a paste is obtained. This mixture is then placed over the stained portion of the marble in the same manner as plaster or cement. The main constituent in this mixture is the sodium citrate. The body or absorbent material is the whiting, the glycerin acts as to keep it moist and plastic, and the water acts as a vehicle and solvent for the sodium citrate.

The reaction in this instance is the reducing action of the sodium citrate on the iron oxide stain, slowly but surely removing it so that it can be absorbed by the whiting. This reaction may take several days, and at

(*Turn to Page* 53)

When you clean house

"Spring cleaning" is more closely related to American Cyanamid & Chemical Corporation's products than most of us would suppose. For instance, you call upon such industries as paint, varnish and lacquer, soap, waxes, polishes, cleaning compounds, disinfectants, wall and floor treatments. In all of these manufacturing fields, and in many more, our products help to *do the job.*

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AMERICAN CYANAMID & CHEMICAL CORPORATION

535 FIFTH AVENUE, NEW YORK

The Quest of Whale Oil

Have Modern Whaling Methods Sounded Its Death Knell?

By MARTIN O'CALLAGHAN, M.D.

From 1921 to 1931, as medical officer with several whaling expeditions, Dr. O'Callaghan had the opportunity to study the development of modern whaling and whale oil production at first hand. He concludes that due to the very efficiency of present methods, the end of whale oil as an important commodity of world commerce is not far distant.

The Editors

HUNTED from pole to pole, pursued relentlessly and persistently by Northmen, Basques, Americans, Asiatics, the whale has been driven in turn from the Mediterranean and Red Seas in the dawn of civilization, from the Bay of Biscay and Western Atlantic in the thirteenth century, from the Behring and Greenland Seas in the nineteenth century, from the Indian and Pacific Oceans in the twentieth century, until today the ice-ringed Antarctic remains its final refuge. Here is being played the last act in the greatest saga of the sea, and the curtain will no doubt soon fall on a drama that had its beginnings ages ago. The whale is probably doomed to early extinction.

While the early history of whaling, when it took place in limited areas about Greenland, Northern Norway or the Mozambique Channel, pointed the moral that too intensive hunting caused a rapid diminution of the numbers caught, it was not seriously believed that the stock was actually becoming depleted. Whaler-men considered that the whales merely migrated from areas which instinct or past association proved to be dangerous. The introduction of the Svend Foyn harpoon gun at the end of the last century and the investigation of scientists since 1923 have altered this conception of whale-migration as a reason for the decline of the mammal in the once prolific regions.

Armed with the new deadly weapon, propelled by steam and equipped with everything which centuries of experience showed to be necessary, Norwegian whaling fleets endeavored to resuscitate Newfoundland, Greenland, Atlantic and Alaskan whaleries which formerly had yielded to the whaler-men of Nantucket and New Bedford rich harvests. But their efforts failed. There were not enough whales in northern latitudes to make the enterprise pay, although more than a quarter of a century had elapsed since the grounds were last "fished." The Greenland, or right, whale had been exterminated in its normal habitat, slaughtered on its own breeding ground, just as the great auk and dodo were extinguished in their island homes.

Zoologists have proved that the gestation period of the whale is not less than twelve months and that a cow does not produce more than one young every two years. The whale, contrary to uninformed opinion, is (like most denizens of the deep) not a long liver. This was conclusively proved by British Museum officials who investigated a school of whales stranded on the Cornock Firth, Scotland, a few years ago. Over 100 carcasses were examined and only three generations were represented in the herd. Not more than twelve to fifteen years separated the senile specimens from the infants. Whales have no definite breeding season. Cows are harpooned in early, middle and late pregnancy simply because the gunner on the forecastle head of the whale-catcher is ignorant of the sex or condition of the quarry he is chasing.

Thus, a slow reproductive rate and a comparatively short life handicap the whale in its fight for survival against high explosives and modern business. The icy fastnesses of the Antarctic are no longer a protection. The giant blue whale, the mighty sperm, the silver finner and the elegant sei whale must suffer the fate of the Greenland whale. Future generations will probably gaze with curiosity at museum specimens and a few, perhaps, will sigh that the deep has been robbed of its most glorious specimen, the mammoth that once reflected the ocean's own mighty power.

THE development of modern whaling is nevertheless one of the greatest business romances of the century. In 1904, Captain Larsen, whose name is second only to that of Svend Foyn in Norwegian whaling history, surveyed the South Atlantic Ocean for potential bases. He it was who founded Antarctic whaling, choosing as a base South Georgia Island, and using as equipment boilers and try-pots abandoned there half a century before by American sealers. From Captain Jacobsen, nephew of Larsen, and his successor as manager of the first Antarctic whaling station at Crytviken, I have heard numerous stories of the intrepidity and uncanny whaling sense of this pioneer, of how he nosed his way on the Sonia, a fifty-ton whaler, through unchartered seas to South Georgia, the South Orkneys and South Shetlands, living on penguin and seal meat for

months at a time and using seal blubber to eke out his scanty bunkers' supply, how with characteristic haste he obtained from Lord Allardyce, Governor of the Falkland Islands, a license for a shore station on South Georgia and how, instead of returning to Norway for capital he went to Buenos Aires and there formed the Argentina de Pasca Company and inaugurated the greatest and wealthiest whale fisheries the long history of the industry has known.

Within a few years, six independent companies were established at Prince Olaf Harbor, Leith Harbor, Stormness Fiord, Tonsberg Fiord, Grytviken and Ocean Harbor, all on South Georgia Island. A resident stipendiary magistrate, customs officer and policeman were appointed by the Falkland Island Government; port dues were exacted from all transports and whalers, and an export duty of seven cents levied on every barrel of oil exported. By 1920, the annual value of the catch, estimated by barrels of oil exported, was £2,500,000 ($12,000,000). In that year, Lever Brothers, who practically control the world market, bought the station at Prince Olaf's Harbor, the smallest on the island, for £750,000 ($3,750,000), of which £700,000 may be reckoned as goodwill payment. There was no element of gambling in those days. Larsen's eye for whales had brought him to the most prolific grounds in the world, where cetaceans spouted and frolicked all day in thousands, and even came up under the fore-foot of the whale-catcher to scrape the sealice off their backs.

In South Georgia was perfected the whole technique of modern whaling, the technique which today is being employed in intensified and unlicensed form in every part of the Antarctic Ocean. Let us consider its development and the causes which have led to whaling on a modern scale, even to the extent of employing aircraft for scouting purposes.

THE shore stations were admirably equipped and well-manned. That on which I served, Leith Harbor, was the largest in the world, employing in the height of the season some 600 hands. Six ocean-going whale-catchers of 120 tons, fourteen knots speed, double-framed, mounting the latest type of Svend Foyn guns and carrying a crew of nine, made up the fishing fleet. Day and night, in all weathers, the catchers were at sea,—sometimes for more than a week,—scouting at distances varying from 10 to 150 miles. On shore were housed engineers, flensers, blubber and carcass boilers, coal trimmers, coopers, chemists and storesmen. A well-equipped hospital, concert hall and a reading room completed the amenities of shore life. A common slop chest, run by the company, supplied on credit every necessity for the rigorous, hazardous life in a waste of ice and snow. Preserved meat, fresh whale meat, canned vegetables and fruits, penguin eggs and fresh fish (during a few months of the year) were the chief items of the dietary. The life was hard but healthy. There is no indigenous disease in the Antarctic, but accidents are numerous and often fatal, as the many wooden crosses at the back of each station prove. Beriberi was at first fairly common because of the lack of fresh meat and vegetables which led to vitamin deficiency. Whale flesh, cut from the sei whale, was added to the dietary, and the disease was stamped out. "The work is dirty but the money's clean," sums up the Norwegian philosophy of whaling. Working on a profit-sharing basis, so much per barrel produced per season according to rank,—operations were carried on at high pressure day and night.

Whale-catchers arrived at all times, towing from one to five whales. Powerful steam winches fitted with steel cables immediately drew the carcasses, often weighing 100 tons, on to a wooden inclined platform, known as the "flensing plane." To leave a carcass in the water is wasteful, since the valuable blubber oil exudes through the thin porous skin. While an army of flensers, armed with six-foot blubber knives, attacked the carcass, the whale-catcher took aboard bunker coal, stores, fresh lines and harpoons, and put to sea again. There was no shore leave. Not a minute was wasted. Blubber and meat were cut into lengths and boiled separately in Hartman steam-pressure boilers at a pressure of sixty-five pounds, the blubber requiring less time for rendering and yielding a better-grade oil. Every part of the whale is utilized. Even the bare skeleton is crushed into a crude bone meal which finds a ready market as poultry food.

Leith station was capable of dealing with fifteen blue whales every twenty-four hours. This means dissecting fifteen mammals of from 80 to 110 feet long, averaging one ton per foot, rendering them into oils of varying grades, tapping and barrelling (or storing in tanks) and grinding down the skeleton. Within twenty-four hours not an unemployed vestige remains of the fifteen leviathans which a day before were reveling in the ocean. So it went, day and night, during the season. The hard-living, hard-swearing whaler-men had little time or inclination for recreation. Nothing was thought of or spoken of but whale. The daily mounting figures of the total barrelage displayed at the slop chest were scanned with intense interest. There was considerable excitement when whalers who had visited other stations brought back figures of competitors' catches for comparison. Otherwise, shore life was monotonous.

IT was to the crews of the whaling fleet that one looked for stirring tales. They are the dashing, devil-may-care cavalry of this grim army, courting adventure and flirting with disaster. Through uncharted seas, in howling gales and blinding snowstorms, they keep contact with the "enemy," drenched to the skin or frozen to the marrow for days on end. The crew consists of a master (called gunner), a mate (called stormand), a chief engineer, two firemen, three deck hands and a steward. The gunner is a proved navigator and skillful harpooner. When coming up with a school of whales he takes his place on the raised forecastle beside the harpoon gun, and directs the course and speed of the

whaler to the mate on the bridge by appropriate hand gestures. No word is spoken. Absolute cooperation between gunner and mate is essential to bring the ship within effective striking distance. This is never more than sixty yards in calm seas or twenty in heavy weather.

When aim has been taken, the charge of 220 grams of nitroglycerine is exploded and the four and one-half foot harpoon, weighing 112 pounds, is sped on its deadly mission. Rarely does a shot miss. "Fast!" sings out the gunner as the shot goes home. Three seconds later a second explosion is heard, caused by the time-fuse bondhead of the harpoon going off inside the whale. The sea is lashed to fury; crimson froth spreads over a large area. The whaler races along as the whale "Sounds." New lines are feverishly bent until three or four hundred fathoms have been paid out. Soon the strain slackens; the line is wound in by a powerful winch; engines go slow astern, and the mangled carcass appears on the surface, where it is inflated with air to keep it buoyant.

This is the usual course of events when the harpoon strikes a vital spot immediately behind either pectoral fin. But a plunging platform often makes a bull's eye impossible and two or three more shots have to be fired before the muscular mass is mortally wounded. In exceptional cases the whale gets away. I have seen a blue whale with three lines fast in him tow the vessel for over a mile inshore until the lines had to be cut for fear of running into shoal water. And whaling lines, made of purest Manila hemp, cost about $10 per fathom.

Gunners earn large wages. They are paid so much per whale, the price ranging from $50 to $10 in descending scale for right, sperm, blue, finner, humpback and sei whales. Good gunners are almost certain to catch from 300 to 500 whales in an eight months' season, making up to $15,000. They deserve it, these toilers of the sea, for no more onerous, ceaseless and ever-vigilant task exists than that of the whaling gunner.

IN 1919-1920 the South Georgia catch was some 300,000 barrels, of which Leith station contributed 92,000 barrels. Then came a series of restrictions imposed by the Falkland Islands Government because of the growing fear that the grounds were becoming "overfished." There was ample material proof for this fear. Humpbacks, which in the early years formed the major part of every catch, were becoming steadily rarer; so were the right and sei whales. Whalers had to proceed farther to sea to catch "finners" and "blues" to keep up the barrelage. Following the decree that every part of the carcass must be used, there came in succession a curtailment of the number of catches allowed per station, a closed season from May to September, a four-fold increase on export duty to raise $1,500,000 to finance a whaling survey under Sir Douglas Mawson, and finally protection for humpbacks right whales, cows and calves.

Used to unrestricted operations, companies which had sunk their huge profits into developing the industry foresaw danger. No scientific proof was as yet forthcoming that the whale was being exterminated, and the companies resented the dictation of London through the Colonial Office. So the idea of pelagic factories was evolved. These were ships able to load and dispose of the kill at sea. From the beginning the Falkland Islands Government had issued a number of licenses for floating factories operating off South Georgia and the South Shetlands. These ships were regarded as "floating stations" and came under the same regulations as the shore stations. They were small vessels; from 3,000 to 6,000 tons, of which the Neko and Scalatrife were the best known. They operated mostly at anchor in Deception Harbor and Admiralty Sound in the Shetlands during December, January and February (the Antarctic Summer), leaving before the ice lanes closed in. From 20,000 to 30,000 barrels was a good catch.

From those floating stations grew the great floating factories of the present day, ships that can keep at sea

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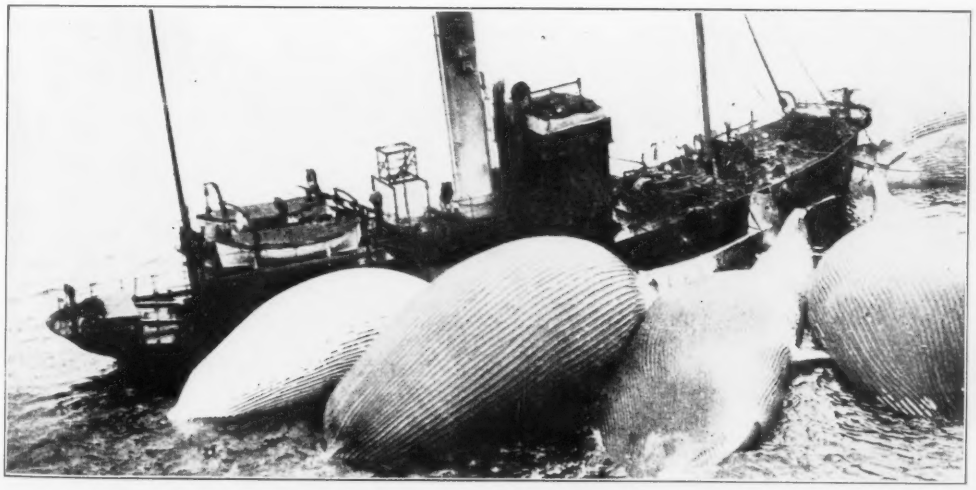

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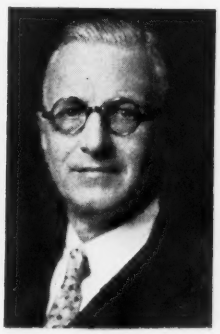
Cecil Smith Heads A. M. T. A.

CECIL SMITH was elected president of the Associated Manufacturers of Toilet Articles at the 39th annual meeting held at the Waldorf-Astoria, New York, April 25-27. Mr. Smith, American manager for Yardley & Co., has been serving as interim president since the recent resignation of H. Henry Bertram. Other officers chosen include: 1st vice-president, W. L. Schultz, Lightfoot-Schultz Co.; 2nd vice-president, Frederick W. Moss, Stanco, Inc.; treasurer, Daniel J. Mulster, Ferd. Muhlens, Inc.; secretary, C. S. Welch. Three new members were elected to the executive board: E. B. Hurlburt, J. B. Williams Co., retiring 1st vice-president; R. R. Brown, American Commercial Alcohol Co.; and Dr. W. T. Haebler, van Ameringen-Haebler, Inc. The last two succeeded S. H. Clark and L. S. Levy. Considerable attention was given at the meeting to trade ethics, the group finally adopting a formal resolution asking the Federal Trade Commission for a conference with a view to formulating a code of trade practices.

Cecil Smith



W. L. Schultz

The operation of a trade practice conference was outlined to A. M. T. A. members by Commissioner William E. Humphreys of the Federal Trade Commission, who pointed out some of the ends the proposed conference can be expected to accomplish. Other speakers also outlined practices which may properly come before the conference. William Resor of J. Walter Thompson Co. speaking on false advertising claims, substitution, slander of competitors, fake advertising, etc. Open floor discussion directed attention to such unfavorable practices as hidden demonstrations, payment for counter space, subsidies to dealers' employees, secret extra commissions, etc.

Among other speakers to address the group was Dr. James M. Doran, U. S. Commissioner of Industrial Alcohol, who spoke on government regulations on the use of alcohol in industry and prospective changes in these regulations in the light of recent developments in the national prohibition situation. W. L. Crounse, Washington representative of the association delivered his annual report, as did Abel I. Smith, counsel for the association.

Entertainment features of the convention included the usual theatre party and supper dance on Tuesday evening. "Strike Me Pink," a musical comedy playing at the Majestic Theatre, was the show chosen, members and guests returning to the Waldorf-Astoria for supper and dancing following the performance. Luncheons were held at the hotel each noon, and the convention was brought to a close, Thursday night, April 27, with the annual reception and banquet in the Grand Ball Room of the Waldorf-Astoria.

The committee in charge of the annual convention this year was composed of L. R. Root, chairman; Charles E. Kelly, William C. Young, B. J. Gogarty, E. W. King, A. C. Burgand, Charles Fischbeck, Edmund Hoffman, P. W. Hyatt, W. E. Claas, E. M. Kaylor, W. P. Murray, H. C. Seaman, and Karl Voss.

—o—

Organic Products, Inc., has been organized by Arthur W. Mudge, formerly manager of the perfumery chemicals division of the organic chemical department of E. I. du Pont de Nemours & Co., and Charles A. Swan, for many years president of Antoine Chiris Co., New York. Plant and offices are located at Waverly Ave., Mamaroneck, N. Y. The new company will manufacture and import a complete line of aromatic chemicals and essential oils for manufacturers of soaps, perfumes, flavoring extracts and allied products.

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Construction by the Vancouver (British Columbia) Harbour Board of vegetable oil storage tanks having a capacity of 50,000 gallons and costing $50,000 has been authorized by the Dominion Government. Large quantities of vegetable oils from the Orient and the South Seas pass through Pacific coast ports annually en route to soap manufacturers of Britain and continental Europe. A large percentage of this business has always gone through Seattle and San Francisco.

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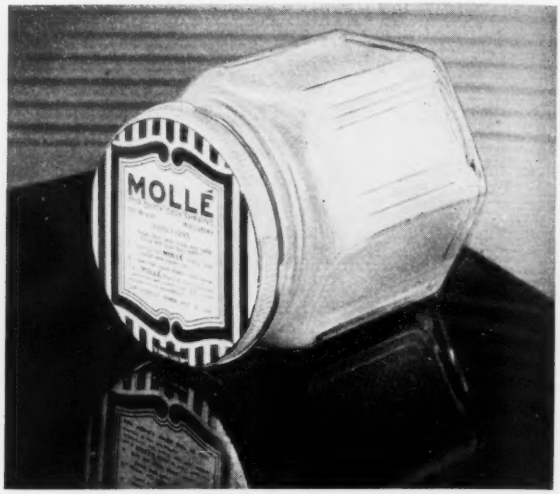
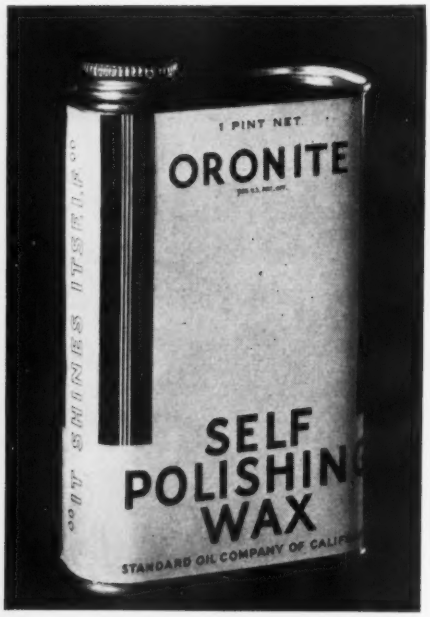
The New York Public Service Commission has approved reduced rates of the New York Central Railroad (East) on glycerin, other than crude, in tank cars, carload minimum weight, as per rule 35, from New York, Brooklyn, and vicinity, to Rensselaer 22.5 cents and to Rochester 28.5 cents per hundredweight; reductions from class rates, effective May 15, 1933.

New Products

MELCO Type Cleaner in a new opal bottle and carton to match with metal stem brush imbedded in a black Durez moulded cap. A product of Louis Melind Company of Chicago.



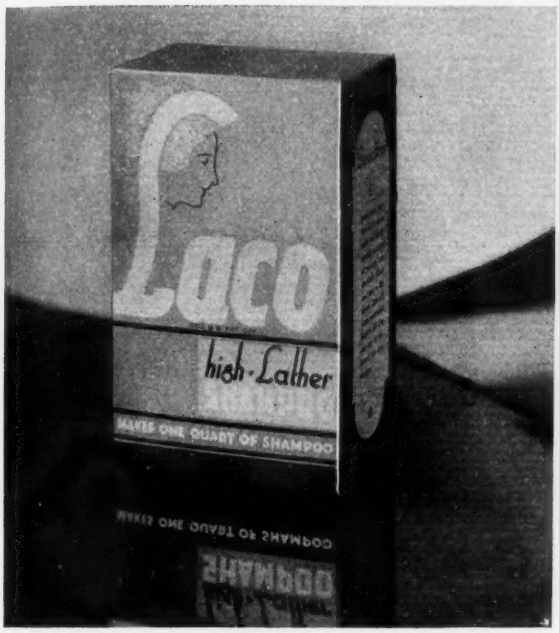
MOLLE, the well-known brushless shaving cream, makes its initial appearance in a wide-mouth jar capped with Amerseal.



ORONITE comes on the market, fostered by the Standard Oil Co. of California. To its line of specialty products, is added a glossy-drying wax. Label is white with blue lettering and bright red panel

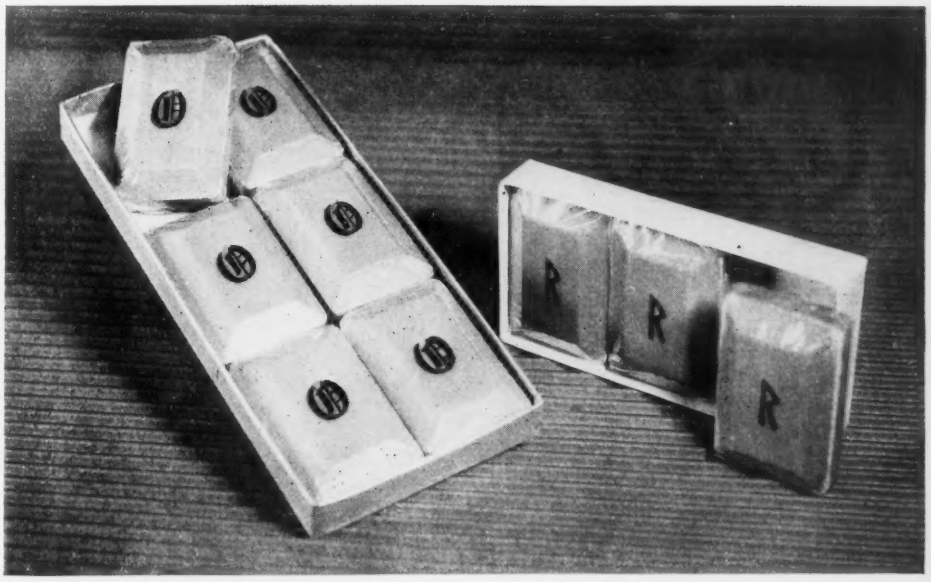
SOCONY brings out a new combination household polishing package to add to its line of specialties,— furniture polish, hard floor wax, and liquid wax for floors, linoleum, etc. Marketing confined to New York and the New England States by Standard Oil Co. of N. Y.

and Packages



LACO High Lather Shampoo, a new dry castile soap shampoo being marketed by Lockwood Brackett Co., Boston. Carton is light green with small salmon panel.

SIB, a hypochlorite product without the usual rubber stopper. In its place is a moulded closure by Anchor Cap, especially designed to resist the action of chlorine. Product manufactured by the Strong, Carlisle & Hammond Co., Cleveland—Stein Photo



A new type INITIAL SOAP which is being manufactured by the Initial Soap Co. of Newark, N. J., in various colors. The letters are stated to remain on cake during entire use protected by a coating of paraffin—Stein Photo

When meal-time brings her great family swarming in to "wash up", forty million pairs of hands fumble for soap. Ten million tracked-up kitchens need cleansers.

The farm woman represents one-third of the American market for soaps and cleansers.

One magazine, and one magazine only, is published exclusively for her.

THE
FARMER'S WIFE
Webb Publishing Company
NEW YORK SAINT PAUL CHICAGO

The makers of these products are cultivating this great market, through The Farmer's Wife:

RINSO	OXYDOL
BON AMI	LUX
P&G NAPTHA	OLD DUTCH CLEANSER

Walter R. Kirk Re-enters Soap Field

Walter R. Kirk, formerly with James S. Kirk Co. at the time of its acquisition by Procter & Gamble Co., has re-entered the soap field as an independent manufacturer, and first public announcement is scheduled for May 16 in the Chicago market. "Hardwater Soap Flakes" and a "Family Soap Cake" will be marketed under the trademark, "Fancy-Dress." The leading James S. Kirk Co. brand is "American Family." David M. Emms, formerly with Calumet Baking Powder Co., is associated with Walter R. Kirk, Inc., as general manager. Advertising agents are C. Wendel Muench & Co. The new Kirk campaign will start in the Chicago market and will rapidly be extended to other cities.

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Complete Indianapolis Tooth Paste Survey

In a study of the sale and distribution of tooth paste in the Indianapolis market, made by the *Indianapolis News*, it was disclosed that 98 different brands of tooth paste are offered for sale in 50 representative drug stores. Of these, "Pepsodent" leads in sales, ranking first in 59.8% of the stores. "Ipana" places first in 23.5%, and "Colgate" in 10%. The only two which attain 100% distribution are "Ipana" and "Pepsodent." The next ten in order being: "Colgate," 98.4%; "Iodent," 98.4%; "Pebeco," 96.8%; "Forhans," 94.9%; "Phillips," 93%; "Listerine," 91.6%; "Dr. West's," 86.5%; "Kolynos," 84.9%; "Squibbs," 84.9%; and "Senreco," 66.6%. The average number of brands stocked is 19.36 in each independent store, with 38.6 the average for each chain store.

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German Soap Exports Decline

For the first time in some years, Germany's export trade in soap underwent a marked unfavorable development in 1932, declining in volume by almost 20 per cent to 39,213,220 pounds, from exports of 48,088,940 pounds in 1931. The value of the exports declined by 24 per cent. Until 1931 German soap exports pursued a steady upward trend, rising each year, from 29,673,916 pounds in 1927, until they reached the peak in 1931. By far the principal item in Germany's soap export trade is soap powder and flakes which (with a small quantity of toilet soap) accounts for 70 per cent of her exports. This item was largely responsible for the expansion in the trade up to 1930, exports of which rose from 19,268,204 pounds in 1927 to 37,122,000 pounds in 1931.

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Governors of Minnesota and Colorado have recently signed State Legislature bills taxing oleomargarine 10c. a pound. The Colorado bill exempts oleomargarine from domestic fats and oils.

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The seal of approval of the American Dental Association has been granted to "Pycope" tooth powder made by Pycope, Inc., Joplin, Mo.

Soap Prices Advanced

Within the last two weeks Procter & Gamble Co. has made advances in prices of "Ivory" and on bar laundry soap. Chip and flake prices have also been advanced, in some cases as much as 5% to 10% according to the report. Plant production has been accelerated to compensate for increased sales which to some degree are attributed to anticipation by buyers in the belief that higher prices are in prospect. Colgate-Palmolive-Peet Co. has announced advances in the prices of a number of its laundry and toilet soaps, and other soap makers are reported to be rapidly following suit.

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Lever Sales Set New Record

In a statement at the annual meeting of shareholders of Unilever, Ltd., F. D'Arcy Cooper, chairman of the board, reported that during the first quarter of 1933 sales of Lever soaps in the United States market have surpassed all previous records both as regards turnover and profits. As he states, this is truly "a most remarkable achievement when considering the conditions prevailing there."

—o—

Ignatius T. Fitzpatrick, head of Fitzpatrick Bros., Inc., Chicago, makers of soaps and cleaners, died April 27 at his home in that city. Mr. Fitzpatrick, who was sixty-five years old, is survived by a widow, Mrs. Daisy Fitzpatrick, a brother James E. Fitzpatrick, and three sisters.

—o—

Foster D. Snell, Inc., chemists and engineers, have moved to 305 Washington Street, Brooklyn, where larger quarters have been provided for both their offices and laboratories. At the new address the ninth floor has been remodelled to give a well integrated laboratory. The executive offices are on the sixth floor of the same building.

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Absorene Manufacturing Co., St. Louis, maker of "HRH Cleaner," is introducing a new package for this product equipped with a sifter-top. Heretofore the sifter-top has been regarded as too expensive equipment for the usual kitchen cleaner package.

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Charles T. Harriott, formerly construction engineer for Swan-Finch Oil Corp., died April 23 at his home in Roselle Park, N. J.

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David Tumpeer, secretary of Wishnick-Tumpeer, who makes his headquarters at the Chicago office, has recently returned from a wedding trip.

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Exports of toilet soap from United States during February, 1933, totaled 316,773 lbs., valued at $38,715. Laundry soap exports amounted to 1,222,397 lbs., worth $50,071.

MUNN

Pale Wood Rosin

NEWPORT

No one should be more interested in a uniformly clean product than a soap manufacturer . . .

MUNN Pale Wood Rosin is not only uniformly clean, but is uniform in color and detergent qualities.

MUNN gives additional richness to the appearance of your soap, increases solubility and *lowers your costs.*

MUNN is packed in the new G. N. S. Compressible Drums, and sold to you on a net weight basis. You can absolutely depend upon each shipment of MUNN duplicating its predecessor.

TECHNICAL DEPARTMENT

The General Naval Stores maintains a staff of practical chemists who are always available to help you solve your manufacturing problems. These men are at your call at all times.

Also producers of Newport Superior Brand Steam Distilled Wood Turpentine and Pine Oil.

GENERAL NAVAL STORES COMPANY, *Inc.*

Address Our Main Office: *75 East 45th St., New York City*

NEWPORT

Plants: *De Quincy, La.—Pensacola, Fla.—Bay Minette, Ala.*

New Boots Soap Plant in Operation

The soap and toilet goods plant of Boots Pure Drug Co., Ltd., at Beeston, Nottingham, England, is now fully staffed and working at capacity, according to

London advices. Besides the usual Boots toilet soaps, shaving creams and soaps, the plant is producing soap flakes for household and industrial sale. The new plant is said to be the most modern of its kind and equipped only with the latest in soap making machinery.

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Leverhulme Investment Trust Formed

The Leverhulme Investment Trust, Ltd., has just been registered in England as a private company to carry on business as an investment and trust company. The nominal capital is £250,000 ($1,250,000) in £1 shares (200,000 preference, 45,000 ordinary, and 5,000 deferred). Lord Leverhulme is permanent governing director and chairman of this undertaking, the chief interest of which will be shares in various Lever enterprises. Viscountess Leverhulme will be a director of the company.

Price Cutters Active in California

Los Angeles Soap Co. has announced a new stop price of 25c. a package on "White King" granulated soap, the new price having been in effect since April 17 in the California territory. To make the new price possible, retailers are given 20 cakes of "White King" toilet soap free with each case of 24 large packages of granulated soap. Los Angeles Soap Co. has been seeking to maintain prices under the provisions of the California "fair trade" act, but in recent weeks many California retailers have started selling below previous 29c. and 27c. stop prices. Complaints have been prepared against several Los Angeles and Hollywood dealers and legal action is planned to force rigid adherence to present levels.

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Whale Research Vessel Returns

The British Research vessel *Discovery II* has reached South Africa at the conclusion of a year in the Antartic. She has circumnavigated the Antarctic Continent, gathering information about the distribution and migration of whales, their rate of growth and reproduction, and the causes of good and bad whaling seasons. The expedition has been financed by the Falklands Islands from whaling revenue and controlled by the Discovery Committee of the Colonial Office. The *Discovery II* covered more miles than any other Polar expedition, and it was the first time that any ship has cruised in the Antartic in the depth of winter. Data of great value to the whale oil industry has been collected.

Don Juan B. de San Roman, proprietor of La Perfumeria La Imperial, S. A., Mexico City, Mexico, manufacturers of soaps and perfumes, acted as host to students of a local technical school and members of the visiting Chilean football team recently, the visitors making a tour of the extensive Imperial plant. Senor Roman is shown, surrounded by his guests at a champagne luncheon served in the plant.

GRASSELLI TRI SODIUM PHOSPHATE

GRASSELLI Tri-Sodium Phosphate is FREE FLOWING . . . because our process permits it to cure.

Non-Sifting Packages. Shipped to you in barrels with paper liner—no loss either in transit or storage. Also comes in kegs and bags. Grades—fines, flake, globular, medium and coarse.

Let us figure on your T.S.P. requirements. If you are in a hurry, call our nearest branch.

THE GRASSELLI CHEMICAL COMPANY

CLEVELAND INCORPORATED OHIO

New York and Export Office: 350 Fifth Avenue

ALBANY, BIRMINGHAM, BOSTON, CHARLOTTE, CHICAGO, CINCINNATI, DETROIT, MILWAUKEE, NEW HAVEN, NEW ORLEANS, PHILADELPHIA, PITTSBURGH, ST. LOUIS, ST. PAUL, SAN FRANCISCO 584 Mission St., LOS ANGELES 2260 E. 15th St.

GRASSELLI

Represented in Canada by CANADIAN INDUSTRIES, LTD. • Acids & General Chemicals Division, Montreal and Toronto

Australian Soaper Plans British Chain

A. E. Whitelaw, Chairman and managing director of Fleming & Whitelaw, Ltd., large Anglo-Australian soap concern, who recently returned to Australia, has placed before a gathering in Melbourne a plan to establish a chain of stores to market Australian soaps, toilet products, and other household goods in Britain. After the meeting a committee was appointed to draw up details for carrying out the plan.

Sir George Rowley Hill, a retired official of the Bank of England, said that the trade rings were the curse of Great Britain and might prove troublesome to the new enterprise. So far as the soap industry is concerned, however, Mr. Whitelaw is already well established, helped by the agreement existing between his firm and Lever Brothers, Ltd.

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German Fat Decree Hits Unilever

The report of Unilever, Ltd., for 1932, to be issued shortly, will be a disappointing one, it is stated from London. Another pessimistic expectation is to be found in the new German margarine decree. This decree, which is part of a larger plan to make Germany self-supporting in staple foodstuffs, is designed to stimulate the home production of butter and fats. With this object, the import duty on margarine, one of Unilever's chief products, will be raised from 30 to 75 marks, and that on artificial edible fats from 12½ to 75 marks. The soap interests of the combine, however, again had a good year in 1932, which should provide some compensation for a diminution in margarine profits.

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Italian Soap Prices Low

At the present time Italian tariff legislation restricts the importation of soap into the country, and prohibits its importation from certain countries. Practically all the common soap imported into Italy comes from France and consists of the Marseilles type. It is reported that the Italian soap makers are paying more attention to this type of soap and the imports from France are accordingly expected to diminish in 1933 and subsequent years. There is a growing demand in Italy for soap powders. A German product is now being introduced in most of the large cities. It is estimated that there are 1,300 soap manufacturers in Italy, and competition is very severe, with the result that prices have been forced down to very low levels.

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Representatives of the food and drug trades met with R. G. Tugwell, Assistant Secretary of Agriculture, April 27-29, to discuss proposed revision of the U. S. Food and Drugs Act.

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Interstate Color Co., New York, manufacturers of certified and technical colors for soap, toilet preparations, para products, etc., has moved to 5 Beekman St. The concern was formerly located at 41 Park Row.

Williams Starts Work on Canadian Plant

Following the approval of plans by the Ville Lasalle council, work began April 26 on the new plant of the J. B. Williams Soap Company of Canada, near Montreal. The plans for the new plant were recently submitted to the Ville Lasalle municipal authorities by an architect of the firm of T. Pringle & Son and were approved. The new building will be built on Lasalle boulevard in the West ward of the town. It will be of brick and four stories high.

The company is well known in Canada and has been contemplating building in or around Montreal for some time. Upon coming to arrangements with the town for a 50 per cent reduction of taxes for a period of ten years immediate decision to build was taken. The new plant will employ a number of local people and since it will be built on the main road facing the river, the officials have promised to build an impressive flower garden in front of the main building. It is hoped to have the plant open by September 1. Most of the construction work will be given to Lasalle people.

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Cut Canadian Toilet Goods Tax

Revision downward of some of the taxes imposed in the recent Dominion Budget was announced by the Minister of Finance, E. N. Rhodes, this week. It includes reduction of the tax on toilet soaps and cosmetics to five per cent. instead of the originally imposed ten per cent. The tax on shaving soaps will be kept at ten per cent. As a result of this decision, five cent cakes of toilet soaps, mostly unwrapped, are again making their appearance on drug store counters. One noticeable result of the imposition of a ten per cent tax on toilet articles by the Dominion Government in its recent budget was the virtual disappearance of the five cent cakes of toilet soap, which were being offered in most places at four cakes for 25 cents. Cut prices on shaving creams also vanished, and some of the wrapped soaps were sold unwrapped with the idea of keeping the price at the old level.

——o——

The index of employment in the American soap industry stood at 93.7 in March, 1933, as compared with 95.1 in February, and 96.8 in March, 1932. The 12-month average for 1926 is taken as 100 in computing the indices. The pay-roll index for March, 1933, was 76.3 as against 78.0 in February, and 89.4 for March, 1932.

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The 14th Exposition of Chemical Industries is to be held in the Grand Central Palace, New York, during the week of December 4, 1933. Three floors of the Grand Central Palace have been set aside, and 150 companies are already reported to have made arrangements for exhibit space at the exposition.

——o——

The April meeting of the New York section of the American Association of Textile Chemists and Colorists was held at the Chemists' Club, New York, April 28.

YARMOR MAKES MIGHTY GOOD SCRUBBING SOAPS

1. They effectively loosen and envelop dirt and grease particles so they can be removed by rubbing and rinsing.
2. Their disinfectant property destroys germs and bacteria with which they come in contact.
3. They can be used to advantage on many types of surfaces such as linoleum, rubber composition, tile, marble, cement, metalware, glass, and porcelain.

Ask your supplier about Yarmor scrubbing soaps.

Steam-distilled Pine Oil
Steam-distilled Wood Turpentine
Wood Rosin
Alpha Terpineol
Commercial Abietic Acid
Hercolyn
Nitrocellulose
Chemical Cotton

HERCULES NAVAL STORES

HERCULES POWDER COMPANY
INCORPORATED
961 Market Street Wilmington, Delaware

Branch Offices: Chicago, New York, St. Louis, Salt Lake City, San Francisco

QQ-34

PERSONAL AND IMPERSONAL

Yardley & Co., London, have taken a ten-year lease on office, display and shop space in Rockefeller Center, New York, and will move June 1 from the quarters at 452 Fifth Avenue which they have occupied for the past five years. Yardley's new offices include a substantial portion of the second floor of the British Empire Building, as well as shop space on the ground floor.

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San Joaquin Valley Soap Company is the new name of the Pacific Soap Company, Modesto, Calif., which was recently purchased by A. Haack, E. H. G. Bennett and G. W. Furrow.

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Lionel Barsalou, president of the J. Barsalou Company, Limited, Montreal, soap manufacturers, died April 23, in his 45th year. Mr. Barsalou was born in Montreal on June 4, 1887, and was educated at Mont St. Louis College, where he pursued a commercial course. He was a member of the Board of Trade, the Chambre de Commerce, and the Laval-sur-le-lac Club. He is survived by his wife, formerly Miss Juliette Lanctot; two daughters, Madeleine and Francoise; his mother, Mrs. Erasme Barsalou; and a brother, Joseph Barsalou.

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Castilian Products Co., Hollywood, Cal., maker of "Castilian" household soap, has appointed Glasser Advertising Agency, Los Angeles, to handle its advertising account.

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Earl A. Means, vice-president of Bristol-Myers Co. in charge of sales, was elected a director at the recent annual meeting. Mr. Means has been with Bristol-Myers since 1906, becoming sales manager in 1912 and vice-president in 1928.

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Procter & Gamble Co. has prepared an advertising campaign to dealers urging them to display and feature three types of soap at the same time—toilet, laundry bar and package. It is pointed out to dealers in the "3-Way Push Plan" that the average female soap user thinks of soap and buys in these three distinct classifications.

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J. R. Watkins Co., Winona, Minn., has organized a Maryland subsidiary with offices in the Baltimore Trust Building, Baltimore.

Cincinnati Soap Co., Cincinnati and Dayton, has completed a modernization of its Dayton plant which has practically doubled its capacity. A system of mechanical handling has been installed which makes the plant much more efficient and economical in operation.

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T. M. Sayman Products Co., St. Louis, maker of "Vegetable Wonder" soap, which has always been marketed through agents direct to the consumer, is bringing out a "Family Package" which will be sold through usual retail channels.

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Bellingham Soap Co., maker of "Wash Maid" soap powder, now located in Bellingham, Wash., is reported to be ready to move to Seattle. Mrs. E. Call is at present Seattle representative for the company.

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A six weeks sampling campaign on "Oakite" in the Chicago market has just been completed, during which 110,000 samples were distributed. A chart giving uses accompanied each sample.

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C. A. Crary Soaps, Inc., has been formed by C. A. Crary of Wyoming, Cincinnati, O., and T. F. Crary of Middleport, Ohio, to manufacture and market the new milled floating soaps of the air-cured type on which the Crarys own the patents. Their soaps are being manufactured for them by the Allen B. Wrisley Co., Chicago.

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Association of American Soap & Glycerine Producers moved its offices on May 1 to 386 Fourth Ave., New York, according to an announcement from Roscoe C. Edlund, general manager. The Association was formerly located at 45 East 17th St. The change in address also affects the subsidiary organizations, Cleanliness Institute, the Glycerine Producers' Association, and the Industrial Soap Association. The new telephone number is Ashland 4—1880.

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Andrew Jergens Co. of California is spending $25,000 in a program of modernization of its Burbank, Cal., plant. New soap mills and plodders have been installed as well as a new type electrical generator.

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Dr. A. T. Frascati, formerly perfumer for Ungerer & Co., New York, has joined the technical staff of Max Factor, Inc., Hollywood, Calif., cosmetic manufacturers, as perfume consultant.

Iowa Soap Co., Burlington, Ia., has appointed Jim Daugherty, Inc., St. Louis, to direct its advertising account.

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Ricardo Hernandez, San Pio No. 4, Santiago De Cuba, is planning on starting a new soap factory in the near future.

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P. H. Allen has been made manager of the toilet articles division of Colgate-Palmolive-Peet Co. in the Columbus, Ohio, territory.

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C. A. Wall & Co., San Francisco, is introducing a new product, "Kitchen Cleanser Creme," in the coast market. A guaranteed "stop price" is featured.

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Saniklene Co., Chicago, cleaning compounds, has recently removed to 3517 Lincoln Ave. from 3138 Southport Ave.

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E. Myron Bull, Hugh W. Reid and Harry J. MacIntyre, 100 Broadway, New York, are listed as directors of Manhattan Soap Sales Corp., newly incorporated under New York State laws as dealers in soaps. The concern is capitalized at $10,000.

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Sapoline Co., formerly located in Walkerville, Ontario, Canada, has relocated in Windsor, Ontario, Canada, at 1020 Ottawa St.

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Dr. E. G. Thomssen, chief chemist of the J. R. Watkins Co., Winona, Minn., and well known soap authority, spent the last two weeks of April in New York and at the Newark, N. J., and Baltimore, Md., plants of the company.

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Procter & Gamble Co. reports net earnings of $2,451,052 for the first quarter of 1933, earnings for the first nine months of the fiscal year which closes June 30, totaling $7,072,752.

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Pine Tree Products Co., following a reorganization and addition of new capital, is planning a new drive on "Pine Tree" soap. Billy B. Van continues as head of the reorganized company, and manufacturing operations will be taken care of at the Cambridge, Mass., plant of Teele Soap Co. An advertising campaign has opened in the Boston market, and will shortly be extended to New York and other territories.

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Puritan Soap Co., Rochester, which over the past few years has been adding to its soap business a complete line of polishes, cleansers, etc., for automotive use, has made several recent additions to the latter line, namely a new type washrack polish, a gasket cement and a fluid for hydraulic brakes.

National Cleanser Products Co., with an office and distributing warehouse located in 2300 square feet at 437-11th Ave., N. Y., has recently been organized with Charles Herman as president. Mr. Herman was formerly connected with the Pittsburgh Cleanser Corp., N. Y. Sam Hirschhorn, also formerly with Pittsburgh Cleanser, is associated with the new company. National Cleanser will manufacture a complete line of special products for the hotel and restaurant trade. In addition, a bulk specialty for the jobbing trade will probably be announced in the course of the next month or two.

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Henry Bristol, Bristol-Myers Co., has been named a director of United Drug Co. Other new directors are: E. J. Griffing, vice-president in charge of sales; W. E. Weiss, Sterling Products, Inc.; and Smith Richardson, president of Vick Chemical Co.

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David A. Bennett, president of the American house of Albert Verley, Inc., Chicago, accompanied by Mrs. Bennett, returned late in April from an extended trip through France and Germany. He reported conditions abroad as very distinctly improved since his previous visit there six months ago.

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Sol-Vo Chemical Co. has been organized in Des Moines, Iowa, to manufacture a cleanser. H. M. Stone is president and offices are located at 1429 Keesaqua Way.

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F. Donald Coster was re-elected president of McKesson & Robbins, Inc., at the recent meeting at which the number of vice-presidents of the company was reduced from forty-five to nine.

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Advertising of Colgate ribbon dental cream and Colgate "Rapid-Shave" have been turned over to Young & Rubicam, Inc., New York. Advertising of all other products is still in charge of Lord & Thomas, Chicago.

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The Procter & Gamble Co. has awarded first place in a national sales contest to its Denver office with F. C. Carlson as district manager. This district comprises the Rocky Mountain region, including Colorado, Wyoming, Western Nebraska, the Black Hills, Utah, Nevada and part of Utah.

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J. R. Watkins Co., Winona, Minn., announces the election of D. C. Alexander and R. C. Boalt as vice-presidents.

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R. N. Mehta, Ganpat Road, Lahore, India, has recently opened a plant for the manufacture of soaps and allied products.

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The Barbasol Co., Indianapolis, has started trademark infringement action against King Blades Distributing Corp., Trenton, N. J.

CHICAGO TRADE NOTES

THE Chicago Perfumery, Soap and Extract Association cancelled its regular May luncheon meeting, replacing it with the Silver Jubilee Stag Dinner which was held at 6:30 P. M. on May 12 at the Knickerbocker Hotel. This affair commemorated the twenty-fifth anniversary of the Association and was held in honor of those who founded the organization at its initial meeting at the old Union Restaurant on Randolph Street in March, 1908. Most of the men who gathered at that time are still actively egaged in business and the names of all of them are well known to the trade. They were: John Blocki, Edgar A. Weber, H. H. Bartold, W. W. Baldwin, William J. Kelly, George F. Merrill, Wood S. Rayburn, C. W. Brown and William Mannhardt. The Association's first president was John Blocki. He was followed in the next few succeeding years by W. W. Baldwin, G. F. Merrill and W. J. Kelly. A few of the founders were of necessity absent from the Silver Jubilee, but the occasion was a memorable one. After an old-fashioned buffet supper in the silver tap room, several hours were spent during which friendships were renewed and memories refreshed. No other entertainment was needed. Arrangements for the Jubilee were made by Euclid Snow of Mallinckrodt Chemical Works, chairman of the Entertainment Committee.

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The Chicago Drug and Chemical Association held its annual spring party on April 27, when the members gathered, with many guests, at a formal dinner with dancing and entertainment at the Streets of Paris Ballroom of the Opera Club. The Parisian note was carried throughout, with the cooking supervised by a French chef, and attractive souvenir programs reproducing a painting showing a scene in the south of France, and printed in French. Members of the Chicago Perfumery, Soap and Extract Association were invited and many were present. The total attendance was 168. Between entertainment numbers the presentation of a gift was made to the retiring president, William O'Neill. The first meeting under the new administration is scheduled for May 25, at the Chicago Athletic Club.

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Elmer F. Smith, of American Aniline Products, Inc., chairman of the golf auxiliary of the two Chicago associations has completed a schedule of five tournaments, with the first two to be held, respectively, at Itasca Country Club on May 16, and Elmhurst Country Club on June 13. The auxiliary now has sufficient members to insure a successful season.

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The tenth annual Mid-West Beauty Trade Show was held on the mezzanine of the Hotel Sherman on April 3, 4, and 5. Visitors and exhibitors were slightly fewer in number than last year but the amount of business transacted at the booths appeared, according to Max Hoefer, president of the Chicago and Illinois Hairdressers Association, to show a decided increase. One of the most interesting of the special features was a prize competition for hairdressers, with five gold cups awarded to those showing the greatest originality and skill. The winners were: first, Emmett Fierro of Cleveland; second, A. O. Farley of Chicago; third, Nora Gunderson of Chicago; fourth, J. G. Nichols of Memphis; fifth, Edward Fuchs of Chicago. Among the prominent exhibitors were, Colgate-Palmolive-Peet Co., Boyer International Laboratories, Marinello, Inc., E. Burnham Laboratories, Kolar Laboratories, A. Breslauer, Inc., Scott's Laboratories, Coty, Inc., Quality Products Co., and Andrea du Val Laboratories.

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Some members of the Chicago trade who attended the A. M. T. A. convention at the Waldorf-Astoria in New York were George Wrisley of Allen B. Wrisley Co.; H. Helfrich of Helfrich Laboratories; Dudley F. Lum of Givaudan-Delawanna, Inc., and David A. Bennett, of Albert Verley, Inc.

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The Third National Premium Exposition will be held at the Stevens Hotel, Chicago, May 15-19. In conjunction will be the annual meeting of the Manufacturers' Merchandise Advertising Association, composed of firms in various fields which use premiums in stimulating sales.

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W. Benkert & Co.,New York, have announced the appointment of Joseph Fahey, Fahey Brokerage Co., Cotton Belt Building, as St. Louis representative. E. M. Tysdal, 325 West Huron St., Chicago, is the newly appointed representative in that district.

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Odorgraphia Committee Reports

The constants of eight of the most important aromatic chemicals used in the perfume and toilet articles industries are given in the first report of the Odorgraphia Committee of the Associated Manufacturers of Toilet Articles. This report has been accepted by the executive board of the Association. A number of substances were selected by the committee and after being purified as much as possible, constants were determined, affording a basis for judging the quality of similar commercial products.

The work on benzyl acetate was done by M. Szamatolski of Givaudan-Delawanna, Inc., New York, and F. J. Austin of Richard Hudnut, New York. Dr. Szamatolski also did the work on phenyl ethyl alcohol and indol. P. G. I. Lauffer, Pinaud Inc., New York, and A. H. Ingalls of Colgate-Palmolive-Peet Co., Jersey City, N. J. determined the constants of eugenol and cinnamic alcohol. Dr. Lauffer also worked on coumarin and Dr. Austin on methyl heptine carbonate. The work on cinnamic aldehyde was performed by Dr. F. D. Dodge of Dodge & Olcott Co., New York.

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Paradichlorbenzene

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They perfume and color in one single operation

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1131 N. Orange Grove Ave.	1282 Folsom St.	1200 No. Ashland Ave.	Balter Bldg., Rm. 407.

RECORD OF TRADE-MARKS

The following trade-marks were published in the April issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

MICKEY MOUSE—This in outline letters with animated figure on wrapper, describing toilet soap. Filed by Manhattan Soap Co., New York, Jan. 19, 1933. Claims use since Dec. 8, 1932.

RED-I-CIDE—This in solid letters describing insecticide. Filed by Redicide Co., Minneapolis, July 9, 1932. Claims use since June 27, 1931.

WORCESTER IODIZED—This in solid letters describing tooth paste and mouth wash. Filed by Worcester Salt Co., New York, Nov. 26, 1932. Claims use since Oct. 11, 1930.

DIL-KIL—This in outline letters describing insecticide. Filed by Dill Co., Norristown, Pa., Feb. 2, 1933. Claims use since June 11, 1932.

HE-SHE—This on reverse plate describing antiseptic. Filed by Helm Co., Benton Harbor, Mich., Feb. 8, 1933. Claims use since Sept. 20, 1927.

DART—This in solid letters with shoe, describing shoe polish. Filed by S. H. Kress & Co., New York, Feb. 11, 1933. Claims use since Nov. 1, 1932.

PRIDE OF THE KITCHEN—This in outlined letters describing washing powder. Filed by Stevens Soap Corp., Brooklyn, Feb. 13, 1933. Claims use since 1863.

SKYLINE—This in solid letters describing cleaner. Filed by E. J. Mallett, Riverdale, Md., Feb. 14, 1933. Claims use since Jan. 30, 1933.

BLUE HEVEN—This in solid letters describing soap and cleaner. Filed by Blue Heven Corp., North Kansas City, Mo., Feb. 17, 1933. Claims use since Aug. 14, 1931.

WIZARD—This in outlined letters describing insecticides. Filed by Wizard, Inc., Chicago, Apr. 4, 1932. Claims use since Feb. 21, 1931.

HIT-A-FLY—This in type resembling script, describing insecticide. Filed by John LeCroy & Son, Camden, N. J., Feb. 6, 1933. Claims use since Dec. 27, 1932.

FRUGAL—This in solid letters with geometrical design, describing soaps and cleaners. Filed by D. E. Bailey, Hamlet, N. C., Feb. 11, 1932. Claims use since Mar. 1, 1931.

CLORENO—This in solid letters describing washing compound. Filed by Claire Mfg. Co., Chicago, Feb. 6, 1933. Claims use since Oct. 10, 1932.

DRI-TEX—This in shaded letters describing liquid dry cleaning soap. Filed by Hercules Powder Co., Wilmington, Feb. 11, 1933. Claims use since Jan. 16, 1933.

PRETONE—This on reverse plate describing cleaning compound. Filed by Pretone Co., Camden, N. J., Feb. 25, 1933. Claims use since Feb. 2, 1933.

BON-O-DENT—This in solid letters describing tooth powder. Filed by P. L. Bonnell, Saint John, New Brunswick, Canada, Oct. 20, 1932. Claims use since April, 1932.

FLEET—This in solid letters describing toothpaste. Filed by Fay Wood Corp., New York, Oct. 27, 1932. Claims use since Oct. 13, 1932.

HENDERSON'S NU-LIFE—This in shaded letters describing insecticide. Filed by James A. Henderson, Turlock, Cal., Jan. 16, 1933. Claims use since Nov. 1, 1931.

CHEVRON—This in solid letters describing shaving cream. Filed by Richard Hudnut, New York, Mar. 11, 1933. Claims use since Sept. 10, 1932.

BARDELLO—This in solid letters describing soap. Filed by Colgate-Palmolive-Peet Co., Chicago, Mar. 17, 1933. Claims use since March, 1925.

ZINK-O-DUST—This in solid letters describing insecticide and fungicide. Filed by J. W. Woolfolk Co., Fort Valley, Ga., Apr. 20, 1931. Claims use since December, 1929.

DAO—This in solid letters describing insecticide. Filed by Dao Corp., Terre Haute, Ind., May 31, 1932. Claims use since Apr. 5, 1932.

WHIZ—This in outline letters describing insecticide. Filed by R. M. Hollingshead Co., Camden, N. J., Nov. 21, 1932. Claims use since Sept. 1, 1905.

PEARLBRIGHT—This in solid letters describing tooth powder. Filed by LaSalle Pharmacal Co., Los Angeles, Feb. 15, 1933. Claims use since Jan. 15, 1933.

BANDIP—This in solid letters describing insecticide. Filed by Sherwin-Williams Co., Cleveland, Mar. 6, 1933. Claims use since Jan. 18, 1933.

Trade Marks Granted

302,378. Polish-Wax. Raynorshyne Products, Inc., San Antonio, Tex. Filed December 3, 1932. Serial No. 332,732. Published January 31, 1933. Class 16.

302,385. Liquid Wax. American Disinfecting Co., Sedalia, Mo. Filed October 31, 1932. Serial No. 331,720. Published January 31, 1933. Class 16.

302,391. Insecticide Chemicals. Hammond Paint & Chemical Co., Beacon, N. Y. Filed October 21, 1932. Serial No. 331,431. Published January 24, 1933. Class 6.

302,392. Brushless Shaving Cream. Samuel Tinsky, Brooklyn. Filed October 17, 1932. Serial No. 331,324. Published January 31, 1933. Class 4.

302,398. Insecticides, Germicides, and Fungicides. California Spray-Chemical Corp., Berkeley, Calif. Filed July 5, 1932. Serial No. 328,546. Published August 30, 1932. Class 6.

302,418. Dentifrice and Antiseptic. Park Laboratories, New York. Filed November 18, 1932. Serial No. 332,264. Published January 24, 1933. Class 6.

302,428. Tooth Paste. Rite Laboratories, Los Angeles. Filed November 28, 1932. Serial No. 332,515. Published January 31, 1933. Class 6.

302,431. Metal Polishes Cleaning Preparations, etc. Ardo Hering, New York. Filed December 24, 1931. Serial No. 322,425. Published January 31, 1933. Class 4.

302,435. Polishes. Aeronautical Industries Research, Minneapolis. Filed April 15, 1932. Serial No. 326,162. Published January 31, 1933. Class 16.

302,438. Polish. Nu-Ra Waxcoat Corp., Brooklyn. Filed July 16, 1932. Serial No. 328,844. Published January 31, 1933. Class 16.

302,449. Insecticide Chemicals. Hammond Paint & Chemical Co., Beacon, N. Y. Filed October 21, 1932. Serial No. 331,430. Published January 24, 1933. Class 6.

302,458. Moth-Proofing Materials. Midwest Hardware Co., Chicago. Filed November 12, 1932. Serial No. 332,096. Published January 17, 1933. Class 6.

302,462. Washing Soda. Buckeye Soda Co., Painesville Township, Lake County, Ohio. Filed November 17, 1932. Serial No. 332,223. Published January 17, 1933. Class 6.

302,463. Antiseptics, Bactericides, etc. Hynson, Westcott & Dunning, Inc., Baltimore. Filed November 18, 1932. Serial No. 332,255. Published January 17, 1933. Class 6.

302,480. Oil Shampoo. Sani-Skalp Co., Beverly Hills, Calif. Filed November 5, 1932. Serial No. 331,922. Published January 24, 1933. Class 6.

302,487. Tooth Paste. Reiss-Premier Pipe Co., West New York, N. J. Filed October 14, 1932. Serial No. 331,266. Published January 31, 1933. Class 6.

302,539. Polish. Liquid Wax, etc. Charles F. Kellom & Co., Holmesburg, Pa. Filed September 28, 1932. Serial No. 330,749. Published February 7, 1933. Class 16.

302,540. Cleansing Compound. F. M. Riggs, Maywood, Ill. Filed September 23, 1932. Serial No. 330,646. Published February 14, 1933. Class 4.

302,575. Soaps. Baltz & Koerper, Philadelphia. Filed August 20, 1932. Serial No. 329,725. Published February 14, 1933. Class 4.

302,576. Hand Soaps. Quality Soap Manufacturing Co., Milwaukee. Filed August 20, 1932. Serial No. 329,719. Published February 7, 1933. Class 4.

302,587. Soap. Kresge Department Store Corp., Newark. Filed May 13, 1932. Serial No. 327,060. Published February 14, 1933. Class 4.

302,680. Polishes and Cleansers. Lanex Corp., New York. Filed December 9, 1932. Serial No. 332,923. Published February 7, 1933. Class 16.

302,690. Soap. Chanel, Inc., New York. Filed December 1, 1932. Serial No. 332,645. Published February 7, 1933. Class 4.

302,781. Washing Compounds. Fermax Products Co., Irvington, N. J. Filed December 22, 1932. Serial No. 333,285. Published February 14, 1933. Class 4.

302,805. Floor Cleaner and Bleach. Kleen Chemical Co., Philadelphia. Filed January 23, 1932. Serial No. 323,437. Published February 14, 1933. Class 4.

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The Quest of Whale Oil

(*From Page* 23)

for a year or more, working as a factory and acting as parent to a half-dozen whale catchers, paying tribute to no nation and recognizing no restrictions. Here was the solution to a thorny problem. Britain might claim the greater part of the Antarctic Continent, but she had no jurisdiction over the ocean beyond the three-mile limit. The open sea is the monopoly of no power. New capital was employed and liners of 10,000 and 15,000 tons were bought up and converted into pelagic factory ships. A start was made in 1926 from Australian and New Zealand ports. Success came almost at once. In 1927-1928 the export of oil from the Antarctic was 804,000 barrels, the increase of nearly 50 per cent being almost entirely due to pelagic whaling. The factory ship Larsen, 15,000 tons, was responsible for over 100,000 barrels, or 17,000 tons of oil in that year.

The handicap to Norwegian whalers was, however, that Norway possessed no Antarctic base. Coal, provisions and gear had to be stored at the British ports of Hobart, Tasmania, or Dunedin, New Zealand, in the east and Port Stanley in the west. Oil had to be transferred at sea from the factory ship to tankers in order to escape the duty levied by Great Britain. A base within easy steaming distance of the Antarctic circle, affording good anchorage, water and facilities for oil storage was necessary. Bouvet Islands, some 900 miles from the Antarctic Circle, was ideal, but Britain claimed it, as did France, since, however, the island was to some extent mythical, being marked on the chart "P.D." (position doubtful), and certainly uninhabited and of

no apparent mineral value, it might be secured by occupying it first and negotiating about it afterward. This was done and the diplomatic dispute that arose was terminated by Great Britain's decision to waive its claim. The press, with the exception of a few sardonic remarks in French papers about being charitable with other people's wealth, was silent. Thus Norway obtained an important adjunct to the development of her second most important industry.

Meantime, whaling had been vigorously prosecuted in the Ross Sea and adjoining grounds for twelve months in the year without restriction. Every scientific development was brought to bear upon the industry's efficiency. The whale was slaughtered at the rate of 40,000 a year. New factory ships were hurriedly built, capable of taking aboard, through a "ramp" in the stern, twelve whales and converting them into oil in twenty-four hours. In July, 1931, the Kosmos II, of 34,000 tons and the largest and most elaborate floating whale oil factory ever built, put to sea for a trial run. Just at present, however, the business of whaling is considerably reduced by an overproduction of the oil through the very efficiency of these gigantic floating plants. The Norwegian industry agreed not to operate last year in order to allow absorption of the oversupply. But according to most experts, the day of undersupply is not far off and then whaling will belong to the industries of the past and its romance will linger only in the pages of such books as Melville's Moby Dick.

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Monsanto Acquires Swann Control

Edgar M. Queeny, president of Monsanto Chemical Works, St. Louis, announced the acquisition, effective April 20, of a controlling interest in Swann Corp., Birmingham. The transaction was made for cash and gives Monsanto control of the $5,000,000 Swann organization whose subsidiaries include: Swann Chemical Co., Birmingham; Provident Chemical Co., St. Louis; and Wilckes, Martin, Wilckes Co., Camden. Their products include tri-sodium phosphate, di-sodium phosphate, detergents, abrasives, lamp black, etc. Swann Corp. was founded in 1917 by Theodore Swann, its president, who will remain with the company in the new set-up as president. The following eight officers of Monsanto have been elected to the Swann board: Edgar M. Queeny, Charles Belknap, Gaston Du Bois, Theodore Rassieur, J. A. Berninghaus, J. W. Livingston, F. A. Ulmer, G. Lee Camp, and the following directors of the old Board were re-elected: Oscar Wells, William H. Weatherly, Ferdinand Wilckes, William H. Hassinger, Lindley C. Morton, Theodore Swann and C. M. Jesperson. Net earnings of Monsanto for the first quarter of 1933 total $296,920, or 69.5c a share, as compared with $275,859, or 64.3c a share, in the same period of 1932.

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R. H. Woodford recently resigned as general sales manager of Mennen Co., Newark, N. J.

New Patents

Conducted by
Lancaster, Allwine & Rommel
Registered Attorneys
PATENT AND TRADE-MARK CAUSES
815 15th St., N. W., Washington, D. C.

Complete copies of any patents or trade-mark registrations reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 1,901,434, germicidal and detergent substances, patented March 14, 1933, by Arthur R. Cade and Halvor O. Halvorson, Minneapolis, Minnesota. A composition of matter comprising an alkali soap of an unsaturated soap forming acid and an alkaline reacting substance in such proportions that an aqueous solution thereof shall have a pH value between 10 and about 12.6 when the concentration of soap in such solution is 0.1%.

No. 1,901,960, insecticidal solution, patented March 21, 1933, by Byron C. Goss, Cleveland, Ohio. An insecticide composition for the protection of woolen goods and the like, comprising a volatile solvent containing a soluble fluoride, bile salts, and carbon dioxide dissolved therein to saturation under sufficient pressure to cause penetration of the insecticide into the goods.

No. 1,893,770, Disinfecting Medium and the Process of Manufacturing the Same, Patented January 10, 1933 by Ernst August Garbe, Berlin-Lichterfelde, Germany. A disinfecting medium in the form of a clear, homogeneous dispersion which is stable against dilution which comprises a mixture of cresol soap solution, glacial acetic acid, and tobacco extract.

No. 1,897,573, Disinfectant and Deodorizer, Patented February 14, 1933 by Francis J. Curran, Chicago, Ill. A disinfecting and deodorizing device, comprising a porous block of balsa wood impregnated with a volatile disinfecting and deodorizing liquid.

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According to a report from the Italian Export Institute trade in new season's bergamot oil from Reggio Calabria is to be free and uncontrolled, with the exception of the regulations governing the purity of the exported material. The old bergamot oil stocks, as previously reported, have been taken over by the Producers' Consortium, and are not to be used for perfumery purposes.

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J. T. Robertson Co., Syracuse, N. Y., soap manufacturers, are now represented in the New York Metropolitan area by the J. R. Smith Sales Co., New York, with John Z. Heizer, former district sales manager at Cleveland, for Procter & Gamble Co., in charge of the sale of Robertson products.

Caustic Soda

High Grade—Solid or Liquid Form

Carbon Tetrachloride

Redistilled—water white—supplied also in combination with other solvents to meet individual requirements

Tri-Sodium Phosphate

Fine granular and powdered. Free-flowing and non-caking

The WARNER CHEMICAL Co.

PIONEER PRODUCER 1886

CHRYSLER BUILDING NEW YORK CITY

Manufacturers of Industrial Chemicals and Distributors for Westvaco Chlorine Products, Inc.

MADE IN 4 POPULAR SIZES

Ideal for Manufacture of Blocks

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TRADE MARK REG. U.S. PAT. OFF.

PARA-DICHLOROBENZENE

Free-flowing for Shaker-Top Cans

Clear, clean crystals. Meet the demands of those who require the purest and best

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

61 Broadway New York

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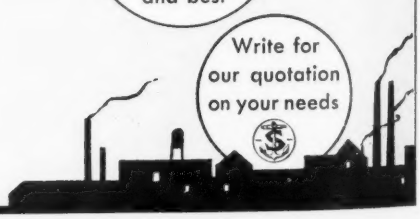

CONTRACTS AWARDED

J. Eavenson & Sons were recently awarded a contract for 4,500 lbs. laundry soap for the Brooklyn U. S. Army Quartermaster at a price of 3.99c. Sunshine Soda Co. awarded 1,680 lbs. laundry soda at 2c. R. M. Hollingshead Co. awarded 25 gals. liquid soap at 22c and 1,000 cans grit soap at 4.1c. Empire Contracting & Equipment Co. awarded 55 gals. cresol at 45c. Francis H. Leggett & Co. awarded 720 bottles ammonia at 5.05c. Clifton Chemical Co. awarded 400 gals. disinfectant at 34.9c. Swift & Co. awarded 3,000 lbs. laundry soap at 4.09c. Kirkman & Son awarded 500 gals. liquid soap at 19.3c. and 1,200,000 lbs. laundry soap at 2.19c. Standard Oil Co. of New York awarded 14,000 lbs. candles at 8.6c. Day & Frick awarded 16,000—13 oz. cakes grit soap at 2.6c. Procter & Gamble Co. awarded 54,000 cakes toilet soap at 1.72c.

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Kranich Soap Co., Brooklyn, was low bidder on 10,000 lbs. castile soap for Jeffersonville U. S. Army Quartermaster in a recent bidding, with a quotation of 6.3c. Newell-Gutradt Co., San Francisco, bid low on 10,000 lbs. leather equipment soap, with a bid of 4.65c. Solarine Co., Baltimore, was low bidder on 1,000 pint cans of metal polish, bidding 8.4c. Peaslee-Gaulbert Corp., Louisville, bid low on 5,000 lbs. flake naphthalene, quoting 5.49c.

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Low bidder on 30,000 lbs. soap powder for U. S. Marine Corps, Washington, in a recent bidding was Armour & Co., Chicago, with a quotation of 1.696c. lb. The same concern was also low on 12,000 lbs. laundry soap with a figure of 2.282c. lb. and 8,050 lbs. chip soap at 3.713c. Kirkman & Son, Brooklyn, and J. Eavenson & Sons, Camden, N. J., tied for low on 4,375 lbs. toilet soap at 4.39c. lb. M. J. Gensberg & Son, Washington, was low on 8,000 lbs. sweeping compound with a figure of 1.3c. Kirkman & Son, Brooklyn, was low bidder on 12,000 cans cleaner with a bid of 1.97c. lb.

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Harley Soap Co. was recently awarded a contract for 3,000 jars soft soap for Brooklyn Medical Department at a price of 11.8c. Kranich Soap Co. awarded 500 bottles castile soap at 9c.

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Peebles Chemical Co., Roslyn Va., was low bidder on 20,000 lbs. caustic soda for U. S. Bureau of Engraving and Printing, Washington, in a recent bidding, with a quotation of 3.08c. lb., delivered.

Newell Gutradt Company, San Francisco, has been awarded contract for 30,000 pounds of salt-water soap and a quantity of grit soap for government use at the Panama Canal. Also awarded to this company was a contract for 10,000 pounds of leather equipment soap for the U. S. Engineers Department at Jeffersonville, Mo.

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United States Steel Corp. has announced development of a method for stabilization of 18% chromium—8% nickel stainless steels by the addition of titanium thus removing the hazard of intergranular corrosion. This will do away with previous difficulties in installations where heat treatment is impracticable after welding, and will also allow use of this type of steel in applications involving high temperatures. The process and methods of heat treatment for manufacture of USS Stabilized 18-8 are thoroughly covered by U. S. Patent applications.

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The New York Public Service Commission has approved reduced freight rates of the Long Island railroad on vegetable oils; including coconut, cottonseed, corn, palm, palm kernel, peanut, soybean and sunflower seed; carloads, minimum weight in packages of 30,000 pounds and in tankcars as per rule 35, from Long Island City to Corona, 9.5 cents per hundredweight; also on corn, cottonseed, palm, peanut, soybean, and sunflower seed oils; carloads, minimum weight same as above, from Blissville docks to Corona, 9.5 cents per hundredweight, and from Bay Ridge to Corona and Long Island City 11.5 cents per hundredweight; reductions from class rates; effective May 8.

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FORMULARIO EXPERIMENTADO PARA PERFUMES, COSMETICOS, JABONES, LISORES, VINOS Y JARABES, by Guido Zamarini, Calle Condesa 17, Apartado 2291, Mejico, D. F. 310 pages. 6 x 8½. Paper binding. Price, 10 pesos ($3.50). This recent publication on the manufacture of perfumes, cosmetics, soaps, etc., in Spanish, covers the field in a comprehensive manner, detailing the best of modern practices, and incorporating a substantial number of practical working formulas for the manufacture of the various products discussed. It is divided into six parts, one being devoted entirely to soaps. Another section of particular interest is the dictionary of synthetics, listing synthetic perfuming materials with recommended uses for each.

Market Report on

ESSENTIAL OILS AND AROMATICS

(*As of May 8, 1933*)

NEW YORK—Prices of essential oils and aromatic chemicals continued their churning tendency this period, with buyers and sellers alike uncertain as to future possibilities, lacking complete data on which to base their positions, and all anxious to protect themselves whatever course future events take. The decline in the value of the dollar was responsible for substantial advances in the cost of imported oils, and domestic oils, notably peppermint, were also surprisingly strong. Sales picked up considerably, several houses reporting the best month of business in several years. Many consumers moved to anticipate future requirements to protect themselves against possible further price advances, but found sellers wary about extending long term contracts at present levels. The tendency of sellers was to pursue a cautious policy, taking care of old customers at current levels, but avoiding long term or speculative contracts which might embarrass them in case of a continuation of the advance.

Anise Oil

Anise oil was quoted higher at 35c. to 37c. lb. this period, rising in conjunction with increased value of silver and Chinese exchange.

Bois De Rose

Both the Brazilian and the Cayenne oil advanced in price this period, the former now being quoted at $1.00 and the latter at $2.00.

Cassia Oil

Cables received late in the period showed a rise in the price of Cassia Oil to 90c.-$1.00 lb. This oil, like Anise Oil, is largely controlled by the price of silver and Chinese exchange, both of which were sharply higher this period.

Citronella Oil

Quotations on Java oil have slipped off somewhat from the sharply higher levels which were reached following first suspension of gold shipments, but the oil is still in firm position and well above its previous low. Current quotations range from 42c. to 44c. lb., with Ceylon oil quoted at 32c. to 35c. lb.

Peppermint Oil

Peppermint Oil prices were sharply higher this period, ranging from $2.10 to $2.30 lb. for natural oil. It has been found practically impossible recently to get quotations from domestic producers, the opinion being expressed that stocks have been centralized in strong hands in the mid-west and that an upward push of substantial proportions is being attempted.

Spearmint Oil

This oil was also advanced sharply during the period just closed, being quoted currently at $1.15 to $1.25 lb.

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George Lueders Dies at 76

George Lueders, chairman of the board of George Lueders & Co., New York, essential oils, died at his home in Summit, N. J., May 4, at the age of seventy-six. A native of Germany, Mr. Lueders early moved to southern France where he came in contact with the essential oil industry. After a number of sales trips to United States he finally set up a permanent establishment in New York in 1885. He was joined by Ferdinand Weber and Henry Heister in 1892, and in 1906 the company was incorporated with Mr. Lueders as president, a position he filled until 1931. Mr. Lueders is survived by his widow, a daughter, Mrs. H. M. Paulsen, and two sons, George K. and Frederick J. Lueders, both of whom are connected with George Lueders & Co.

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Compagnie Duval, New York, importers and manufacturers of perfuming materials, has moved from 32 Cliff St. to 121 E. 24th St. They have been located at the old address for almost twenty years. F. W. Heine and Charles Heine are the owners of the business, the former being engaged in the selling end and the latter in the laboratory. Among other things, the company makes a well-rounded line of compounds for perfuming sanitary products.

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Alphonse Pillet has been named sales manager for perfumery aromatics in the organic chemical division of E. I. du Pont de Nemours & Co. Mr. Pillet's first connection was with Rhodia Chemical Co. He joined Newport Chemical Works as a result of the absorption of Rhodia in 1929, and later moved on to du Pont following the acquisition of Newport in 1931.

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Harry Cohen, Candler Annex Building, Atlanta, has been made representative in that territory for Cino Chemical Products Co., Cincinnati, and Norda Essential Oil & Chemical Co. and L. Sonneborn Sons, Inc., New York.

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Kenneth Laird, for several years advertising manager of the Western Company, Chicago, has been elected vice-president in charge of advertising.

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Puritan Chemical Co., Atlanta, insecticides, has named Johnson-Dallis Co., Atlanta, as its advertising representative.

Market Report on

SOAP AND DISINFECTANT CHEMICALS

(*As of May* 8, 1933)

NEW YORK — Shipments of soap and disinfectant chemicals picked up moderately during the period just closed as revival of activity in many lines of industry and a series of price advances prompted chemical users to replenish stocks in anticipation of a possible higher price level. Changes during the period included a reduction in the schedule on carbon tetrachloride, an advance in the cost of imported caustic potash, higher prices on dynamite glycerin and a general upward sweep in the rosin list.

Alkalies

Shipments of alkalies picked up this period due to increased demand by the glass industry which has been stimulated by the recent legalization of beer. The soap industry took increased tonnage, also, with the result that shipments ran ahead of the same period last year. Higher quotations have recently been put into effect on imported caustic potash, due to movements in foreign exchange. The imported product now brings 6⅞c to 7⅛c lb. with 7⅝c to 8⅝c lb. the range on imported flake.

Carbon Tetrachloride

Producers revised the carbon tetrachloride price schedule this period in order to bring about more uniformity in resale quotations and establish a more direct control of market prices. The car lot price was dropped a cent to 5¼c lb. and the L. C. L. price was lowered half a cent to 6 to 8½c lb.

Glycerin

Dynamite glycerin advanced this period as a result of substantial buying for foreign account, the current quotation being 8¼c to 9c lb. An attempt was also made to advance the price of crude glycerin, but this met with little success.

Rosin

Rosin prices advanced on all grades this period, sharing in the upward movement which swept the commodity markets. Devaluation of the dollar has made American rosin available for export at very attractive prices. So far in the new season arrivals at distributing points have shown no tendency to increase, contrary to the prediction that there will be an increase in production this year. Stocks in the hands of users are believed to be small, exerting a further bullish effect on the market. Closing quotations follow: Gum rosin, grade B, $3.85; H, $4.70; K, $4.85; N, $5.10; WG, $5.25; WW, $5.60; Wood, $4.13 to $4.33.

Cleansers For Rubber Flooring

The usual solvents, such as trichloroethylene, carbon tetrachloride, etc., as well as alkalies, cannot be used for cleansing rubber flooring without causing trouble. When the floor is not very dirty, a mixture of 900 parts of trisodium phosphate and 100 parts of powdered sodium silicate, used in the proportion of 50 parts of the mixture to 10,000 to 15,000 parts of water, is recommended. A solution of soap in tetralin or heavy benzene is also a good cleanser when used mixed dilute with lukewarm water. Then again 100 parts of distilled red oil are mixed with 50 parts by weight of denatured alcohol and saponified with 50 parts by weight of 40 degrees Bé. caustic soda solution. There are added 300 parts by weight of soft water and 500 parts by weight of spindle oil. *Der Chemishe Technische Fabrikant*, 1932, page 776.

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During the recent bank moratorium the national advertising situation was somewhat complicated and there was believed to be a possibility of wholesale cancellation of schedules. The situation was clarified considerably by the following letter from the associate advertising manager of Lever Bros. Co., in response to a request from *Printer's Ink*:

"In reply to your telephone request that we give you a statement with reference to our advertising plans during the present period, we are glad to make an exception to our customary policy of not making statements for publication and hereby authorize you to quote us substantially as follows:

"'Lever Brothers Company, makers of Lux, Lifebuoy, Rinso and Lux Toilet Soap, state under date of March 10th that their present plans call for no cancellation or postponement of their regular advertising schedules —which embrace a wide list of magazines and several hundreds of newspapers throughout the entire country.'" Another confidence-building move was made by Lehn & Fink, Inc., makers of "Pebeco" toothpaste who offered to accept one dollar checks from buyers for lots of three tubes of "Pebeco."

—o—

William Trevillian, vice-president of the W. T. Rawleigh Co., Freeport, Ill., recently cooperated with the police authorities in that city in a $25,000 kidnaping plot by permitting himself to be kidnaped after the plan had been discovered so that the criminals could be apprehended. One of the kidnapers was an employe of the Rawleigh firm.

SPECIALTY SOAPS

LIQUID SOAP BASE

Coco Oil—60%—Natural, Opal, Green

LIQUID SOAPS

Coconut ..... 10% to 45%
Olive Oil .... 10% to 30%

Colored and Perfumed

SCRUBBING SOAPS

Pine, Sassafrass, Plain

LIQUID SHAMPOOS

Coconut Oil .. 30% to 45%
Olive Oil 30%
Castile 30%

POWDERED and GRANULATED SOAPS

Castile, U. S. P.
Coco Castile 50-50
Pure Coconut

SOFT POTASH SOAPS

Light and Dark

U. S. P. 9th and 10th

PHONE CUMBERLAND 6-2800

KRANICH SOAP CO.

54-60 RICHARDS ST. BROOKLYN, N.Y.

RED OIL

TALLOWS

Controlled Production:—

We collect, render and refine all of the raw materials used in our stearic acid and red oil. This close control, not available in any other brand, insures high quality products by eliminating low grade raw materials. Let us submit samples and prices. There is no substitute for quality. Use them in your

Dry Cleaning Soaps

Shaving Soaps

Special Cleaners

Polishes

Liquid Soaps

FANCY - EXTRA and SPECIAL TALLOW

Fatty Acids

Theobald Animal By-Products Refinery

KEARNY, N. J.

ESTABLISHED 1914

Market Report on

TALLOW, GREASES AND OILS

(*As of May* 8, 1933)

NEW YORK — Prices of soapmaking fats, oils and greases surged forward this period, gains of a cent a pound and more being spread freely through the whole list. On the basis of recent quotations such gains amounted to advances of twenty-five to forty per cent on some items. The advance was brought on, of course, by prospects of inflation and the President's avowed intention of restoring commodity price levels to a pre-war basis, by one means or another. All commodity and security markets moved forward together. Substantial purchases were apparently made by consumers on the advance, as they sought to convert cash into commodities and also to anticipate future needs at the deflation price level. Additional strength was lent to the market by the report that leading soap makers have advanced prices due to higher raw material costs.

Coconut Oil

Coconut oil followed rather than led the price advance, demand for this oil not being outstanding. At the close New York tanks of Manila oil were quoted at 3½c lb., an advance of only ½c from last period. Copra also lagged behind the rest of the market, its advance being only fractional.

Corn Oil

Corn oil also was moved forward largely by strength in grain and competing products rather than by any actual expansion in demand for this particular oil. Closing quotation, 4⅛c lb. for tanks of crude oil.

Cottonseed Oil

Cottonseed oil advanced sharply this period, crude oil going from 2⅞c to 4c lb. and PSY closing at 4¾c up a cent a pound. The sharp advance in security markets was a factor, as was the slowness of the domestic crop. Producers are not anxious to sell ahead, looking for a waiting policy to bring them even better prices if the price level is elevated as high as the administration is reported to favor.

Lard

Lard scored a good advance this period, closing at 5⅞c lb., up a cent and a half from the previous month. Sentiment still remained bullish after the advance, futures reflecting traders belief in a further upward movement. Stocks at Chicago are now only 25,000,000 lbs., as against over twice that amount a year ago.

Tallow

Soap makers were active in the tallow market this period, bidding prices up to 3⅜c lb. for city extra tallow, an advance of three-quarters of a cent a pound. It is reported that, while the larger companies are well supplied with low cost raw materials, some of the smaller soap companies are short of stocks. Anxious to go into the reflation period with substantial supplies of low cost raw materials, they entered the market with both feet last period, this buying together with strength in competing products bringing the advance. The greases also advanced, house and yellow now being quoted at 3¼c, up one cent a pound from last period.

—o—

Tropical S / A has been formed in Sao Paulo, Brazil, by acquisition of the properties of Porchat & Portal, Ltda., and Jutahy S. Telles. Dr. Eusebio B. De Queiros Mattoso, Banco de Commercio e Industria de Sao Paulo, is president of the new concern, and the managing directors are: Dr. Oswaldo L. Porchat, formerly of Armour of Brazil Corp., and Dr. Jutahy S. Telles, formerly with Anglo-Brazilian Commercial Agency Co. The company operates an industrial department which will offer disinfectants, sanitary products, paints, polishes, cleaners, etc. It will also maintain a representations department acting for foreign principals to extend sales in the Brazilian territory.

—o—

At the recent annual meeting, directors of Merck & Co., Rahway, N. J., voted to retire $300,000 in first mortgage bonds, thus eliminating the total outstanding bonded indebtedness of the company. Frederic Rosengarten was re-elected chairman of the board, George W. Merck, president, and R. E. Gruber, James J. Kerrigan and Joseph Rosin, vice-presidents. The resignation of Joseph R. Rosengarten, Jr., as vice-president was accepted with regret.

—o—

Standard Oil Company of New York has introduced the "Socony Household Pack" or floor, furniture and woodwork polishes, retailing at $1.95. Newspaper and radio advertising are being used on the new package. A premium of a floor polisher or a lamp shade accompanies each sale.

—o—

Stocks of crude cottonseed oil on hand in United States as of March 31, 1933, totaled 161,245,721 lbs., as against 129,972,523 at the same date in the previous year. Stocks of refined oil were 807,376,426 on March 31, 1933, as against 684,257,843 lbs., March 31, 1932.

—o—

Exports of castile soap from Spain to the United States during 1932 amounted to 814,844 pounds valued at $60,874.

STAUFFER CHEMICALS

for Soaps *and* Cleaners

Caustic Soda

"STAUFFER BRAND" Caustic Soda can be supplied either solid or liquid, in drums or tank cars. It is uniform, pure and worth while using in your soap products. Send your next Caustic Soda inquiry to us.

Carbon Tetrachloride

"STAUFFER BRAND" Carbon Tetrachloride will make a good cleaner better. It is 99.9% pure, the purest obtainable anywhere, is water white and is absolutely free from residue or residual odor. May we work with you when you are next in the market? Let us submit samples and prices. Anything from a drum up.

May we estimate on your requirements?

STAUFFER CHEMICAL COMPANY

Plants
Niagara Falls, N. Y.
Los Angeles, Cal.

Office
420 Lexington Ave.
New York City

Terpineol, C. P.

Water White—Fine Odor—One of the Best Low Cost Odors for Soaps, Fly Sprays, Deodorizing Blocks, etc.

Menthol Crystals

Synthetic

White Crystals with Fine Natural Odor for mentholated shaving creams, soaps, shampoos, lotions, creams

Thymol U.S.P.
Prime White Crystals

Camphor
Synthetic

Products of SCHERING-KAHLBAUM, A. G., Berlin

SHERKA CHEMICAL CO., INC.

New Address: 75 WEST STREET, NEW YORK, N. Y.
Telephone: BOwling Green—9-7482
Sole Importers for the U. S. A.

CURRENT PRICE QUOTATIONS

As of May 8, 1933

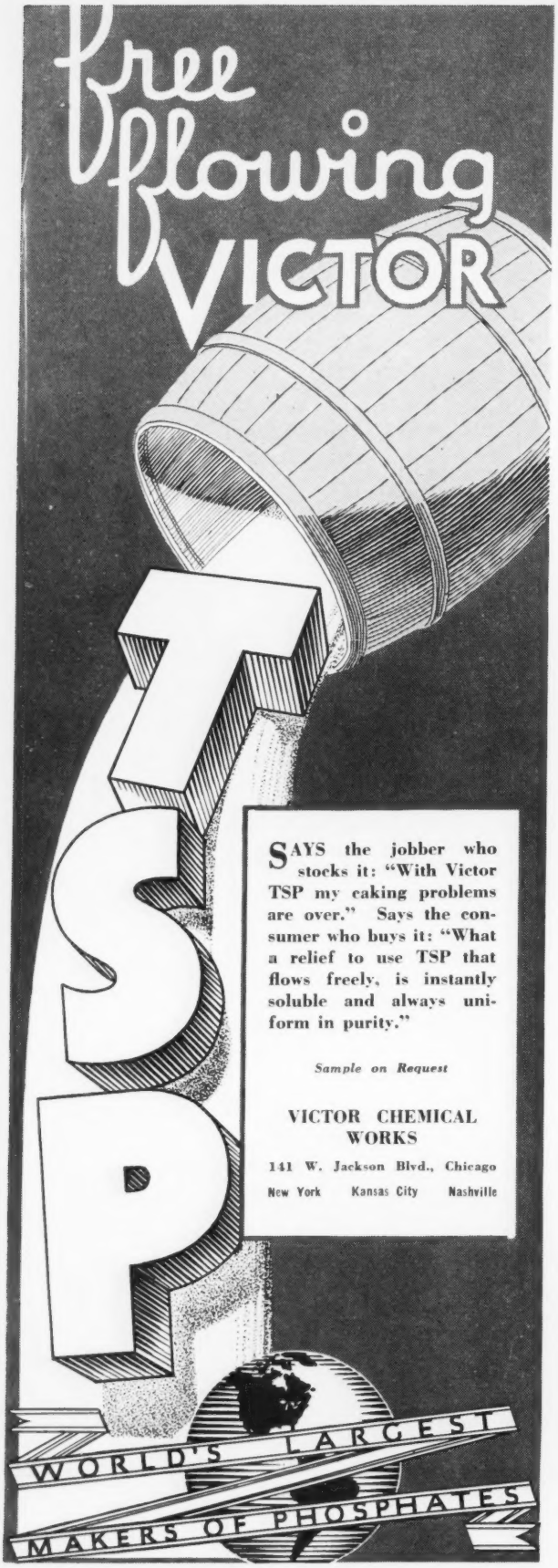
Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums....lb.	.08½	.10
Acid, Boric, bbls., 99½%....ton	95.00	100.00
Cresylic, 97% dk., drums....gal.	.37	.40
97-99%, pale, drums....gal.	.42	.45
Oxalic, bbls....lb.	.11	.11¼
Adeps Lanae, hydrous, bbls....lb.	.14	.15
Anhydrous, bbls....lb.	.15	.16
Alcohol, Ethyl, U. S. P., bbls....gal.	2.45	2.59
Complete Denat., No. 5, drums, ex. gal.	.38½	.46¼
Alum. potash lump....lb.	.03	.03¼
Ammonia Water, 26°, drums, wks...lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls...lb.	.08	.12½
Bleaching Powder, drums....100 lb.	1.75	2.35
Borax, pd., cryst., bbls., kegs....ton	50.00	55.00
Carbon Tetrachloride, car lots....lb.	—	.05¼
L. C. L....lb.	.06	.08½
Caustic, see Soda Caustic, Potash Caustic		
China Clay, filler....ton	10.00	25.00
Cresol, U. S. P., drums....lb.	.09	.10
Cresote Oil tanks....gal.	.11½	.12½
Feldspar (200 to 325 mesh)....ton	14.00	15.50
Formaldehyde, bbls....lb.	.06	.07
Fullers Earth....ton	15.00	24.00
Glycerine, C. P., drums....lb.	.10¼	.10½
Dynamite, drums....lb.	.08¼	.09
Saponification, tanks....lb.	.05	.05½
Soaps, Lye, tanks....lb.	.04½	.05
Hexalin, drums....lb.	—	.30
Kieselguhr, bags....ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls....per bbl.	1.70	2.20
Mercury Bichloride, kegs....lb.	.93	1.08
Naphthalene, ref. flakes, bbls....lb.	.04¾	.06
Nitrobenzene (Myrbane) drums....lb.	.09½	.11
Paradichlorbenzene, bbls., kegs....lb.	.15	.23
Paraformaldehyde, kegs....lb.	.38	.39
Petrolatum, bbls. (as to color)....lb.	.01⅞	.06¾
Phenol, (Carbolic Acid), drums....lb.	.14¼	.16
Pine Oil, bbls....gal.	.59	.65
Potash, Caustic, drums....lb.	.06⅛	.07⅛
Flake....lb.	.07	.08⅝
Potassium Bichromate, casks....lb.	.08	.08½
Pumice Stone, powd....100 lb.	2.50	4.00
Rosins (600 lb. bbls. gross for net)—		
Grade B to H, basis 280 lbs....bbl.	3.85	4.70
Grade K to N....bbl.	4.85	5.10
Grade WG and WW....bbl.	5.25	5.60
Wood....bbl.	4.13	4.33
Rotten Stone, pwd. bbls....lb.	.02½	.04½
Silica, Ref., floated....ton	18.00	22.00
Soap, Mottled....lb.	.03½	.04
Olive Castile, bars....lb.	.09	.12
powder....lb.	.17	.22
Olive Oil Foot....lb.	.04½	.06
Powdered White, U. S. P....lb.	.10	.12
Green, U. S. P....lb.	.06	.08
Tallow Chips....lb.	.05	.06
Whale Oil, bbls....lb.	.04	.04½
Soda Ash, contract, wks., bags, bbls. 100 lb.	1.17½	1.43
Car lots, in bulk....—	—	1.05
Soda Caustic, Cont., wks., sld...100 lb.	—	2.55
Flake....lb.	—	2.95
Liquid, tanks....lb.	2.15	2.20
Soda Sal., bbls....100 lb.	1.05	1.15
Sodium Chloride (Salt)....ton	11.40	14.00
Sodium Fluoride, bbls....lb.	.07½	.08½
Sodium Hydrosulphite, bbls....lb.	.22	.26
Sodium Silicate, 40 deg., drum, 100 lb.	.75	.80
Drums, 60 deg. wks....100 lb.	—	1.65
In tanks, 15c. less per hundred, wks.		
Tar Acid Oils, 15-25%....gal.	.21	.25
Trisodium Phosphate, bags, bbls....lb.	.03	.0390
Zinc Oxide, lead free....lb.	.06	.06¼
Zinc Stearate, bbls....lb.	.16	.18

Oils—Fats—Greases

Castor, No. 1, bbls....lb.	.09	.10
No. 3, bbls....lb.	.08¾	.09½
Coconut		
Ceylon, Coast Tanks....lb.	.03	.03⅛
Cochin, barrels, N. Y....lb.	.05	Nom.
Manila, tanks, N. Y....lb.	.03⅜	.03½
Tanks, Pacific Coast....lb.	.03	.03⅛
Cod, Newfoundland, bbls....gal.	.22	.23
Copra, bulk, Coast....lb.	.0170	.0180
Corn, tanks, mills....lb.	—	.04⅛
Bbls, N. Y....lb.	.05¾	Nom.
Cottonseed, crude, tanks, mill....lb.	.03⅞	.04
PSY....lb.	—	.04¾
Degras, Amer., bbls....lb.	.02½	.03¾
English, bbls....lb.	.03	.03¼
German, bbls....lb.	.02¾	.03
Neutral, bbls....lb.	.05½	.07½
Greases, choice white, bbls., N. Y...lb.	.03⅜	.03½
Yellow....lb.	.03⅛	.03¼
House....lb.	.03⅛	.03¼
Lard, prime, steam, tierces....lb.	.05¾	.05⅞
Compound tierces....lb.	.07¼	.07½
Lard Oil,		
Extra, bbls....lb.	—	.07
Extra, No. 1, bbls....lb.	—	.06¾
No. 2, bbls....lb.	—	.06¼
Linseed, raw, bbls., spot....lb.	.0860	.0900
Tanks, raw....lb.	—	.0800
Boiled, 5 bbls. lots....lb.	—	.0980
Menhaden, Crude, tanks, Balt....gal.	.10½	Nom.
Oleo Oil, No. 1, bbls., N. Y....lb.	—	.06⅝
No. 2, bbls., N. Y....lb.	—	.05¾
Olive, denatured, bbls., N. Y....gal.	.62	.64
Foots, bbls., N. Y....lb.	.05	.05¼
Palm....lb.	.03¼	.03½
Palm Kernel, casks, denatured....lb.	—	.03⅜
Peanut, domestic tanks....lb.	.04¾	Nom.
Red Oil, distilled, bbls....lb.	.06¼	.06⅞
Saponified, bbls....lb.	.06¼	.06⅞
Tanks....lb.	—	.05¼
Soya Bean, domestic tanks, N. Y...lb.	—	.05
Stearic Acid		
Double pressed....lb.	.08½	.09
Triple pressed, bgs....lb.	.11¼	.11¾
Stearine, oleo, bbls....lb.	.05	.05¼
Tallow, special, f. o. b. plant....lb.	.03⅛	.03¼
City, ex. loose, f. o. b. plant....lb.	.03¼	.03⅜
Tallow, oils, acidless, tanks, N. Y...lb.	—	.05½
Bbls., c/1, N. Y....lb.	—	.06
Whale, crude....lb.	.03½	.04
refined....lb.	.05¾	.06


free flowing
VICTOR
TSP
SAYS the jobber who stocks it: "With Victor TSP my caking problems are over." Says the consumer who buys it: "What a relief to use TSP that flows freely, is instantly soluble and always uniform in purity."
Sample on Request
VICTOR CHEMICAL WORKS
141 W. Jackson Blvd., Chicago
New York Kansas City Nashville
WORLD'S LARGEST
MAKERS OF PHOSPHATES

WELL CHOSEN

SILICATE

A BID FOR BETTER TRADE

FINER SOAPS—successful competition—more than often trace a course from well selected Silicate of Soda.

"**STANDARD**"—a Silicate self-named by wide adoption—fronts the field in point of universal fitness.

"**STANDARD**" gives *Clarity* an added meaning, uniformly meets all 'round requirements and outputs a bar that stands high under the strong light of comparison.

• RELY ON
STANDARD
SILICATE OF SODA

"Make it Your Standard"

STANDARD
SILICATE COMPANY

CINCINNATI · OHIO

OFFICE • 414 Frick Building, Pittsburgh, Pa.

FACTORIES:
Cincinnati, O. Lockport, N. Y. Marseilles, Ill. Jersey City, N. J.

4 FACTORIES 4 BETTER SERVICE

Essential Oils

Almond, Bitter, U. S. P.	lb.	$2.25	$2.50
Bitter, F. F. P. A.	lb.	2.50	2.75
Sweet, cans	lb.	.47	.50
Anise, cans, U. S. P.	lb.	.35	.37
Apricot, Kernel, cans	lb.	.20	.22
Bay, tins		1.30	1.70
Bergamot, coppers	lb.	1.35	1.65
Artificial	lb.	1.05	1.15
Birch Tar, rect., tins	lb.	.45	.50
Crude, tins	lb.	.12	.13
Bois de Rose, Brazilian	lb.	1.00	1.10
Cayenne	lb.	2.00	2.10
Cade, cans	lb.	.25	.29
Cajuput, native, tins	lb.	.48	.55
Calamus, tins	lb.	2.75	3.25
Camphor, Sassy, drums	lb.	.12	.13
White, drums	lb.	.12	.13
Cananga, native, tins	lb.	1.50	1.70
Rectified, tins	lb.	2.00	2.25
Caraway Seed	lb.	1.40	1.45
Cassia, Redistilled, U. S. P.	lb.	.90	1.00
drums	lb.	—	.85
Cedar Leaf, tins	lb.	.56	.60
Cedar Wood, light, drums	lb.	.24	.27
Citronella, Java, drums	lb.	.42	.44
Citronella, Ceylon, drums	lb.	.32	.35
Cloves, U. S. P., cans	lb.	.70	.80
Eucalyptus, Austl., U. S. P., cans	lb.	.23	.24
Fennel, U. S. P., tins	lb.	.95	1.00
Geranium, African, cans	lb.	4.25	5.25
Bourbon, tins	lb.	4.25	4.75
Hemlock, tins	lb.	.60	.70
Lavender, U. S. P., tins	lb.	1.30	3.50
Spike, Spanish, cans	lb.	.48	.50
Lemon, Ital., U. S. P.		.80	1.10
Lemongrass, native cans	lb.	.40	.50
Linaloe, Mex., cases	lb.	1.15	1.45
Neroli, Artificial	lb.	10.00	20.00
Nutmeg, U. S. P., tins	lb.	.80	.90
Orange, Sweet, W. Ind., tins	lb.	1.10	1.15
Italian cop.	lb.	.90	1.30
Distilled	lb.	.40	.45
Origanum, cans, tech.	lb.	.25	.50
Patchouli	lb.	3.00	3.50
Pennyroyal, dom.	lb.	1.70	1.80
Imported	lb.	1.20	1.30
Peppermint, nat., cases	lb.	2.10	2.30
Redis., U. S. P., cases	lb.	2.30	2.55
Petit Grain, S. A. tins	lb.	.90	.95
Pine Needle, Siberian	lb.	.58	.63
Rose, Natural	oz.	6.00	15.00
Artificial	oz.	2.00	2.75
Rosemary, U. S. P., tins	lb.	.27	.30
Tech., lb. tins	lb.	.22	.25
Sandalwood, E. Ind., U. S. P.	lb.	5.00	5.75
Sassafras, U. S. P.	lb.	.60	.90
Artificial	lb.	.17	.19
Spearmint, U. S. P.	lb.	1.15	1.25
Thyme, red, U. S. P.	lb.	.50	.70
White, U. S. P.	lb.	.60	.80
Vetivert, Bourbon	lb.	4.25	4.50
Java	lb.	16.00	20.00
Ylang Ylang, Bourbon	lb.	3.50	5.50

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.50	$2.25
Amyl Cinnamic Aldehyde	lb.	3.50	4.25
Anethol	lb.	.90	1.00
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.10	1.30
Benzyl, Acetate	lb.	.55	.95
Alcohol	lb.	.70	1.15
Citral	lb.	1.75	2.40
Citronellal	lb.	2.25	2.50
Citronellol	lb.	2.25	3.00
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	1.05	1.20
Eucalyptol, U. S. P.	lb.	.55	.65
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	1.25	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	2.50	4.00
Heliotropin	lb.	1.75	2.00
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.60	6.50
Iso-Eugenol	lb.	2.90	4.00
Linalool	lb.	1.65	2.00
Linalyl Acetate	lb.	2.10	3.50
Menthol	lb.	3.00	3.10
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.25
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	5.75	6.00
Ketone	lb.	5.50	6.50
Moskene	lb.	5.00	6.00
Xylene	lb.	2.00	2.50
Phenylacetaldehyde	lb.	4.00	6.50
Phenylacetic Acid, 1 lb., bot.	lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.25	4.50
Rhodinol	lb.	6.00	9.50
Safrol	lb.	.20	.23
Terpineol, C. P., 1,000 lb. drs.	lb.	.27	.29
Cans	lb.	.31	.32
Terpinyl Acetate, 25 lb. cans	lb.	.75	.90
Thymol, U. S. P.	lb.	1.25	1.35
Vanillin, U. S. P.	lb.	4.50	5.75
Yara Yara	lb.	1.30	2.00
Insect powder, bbls.	lb.	.17	.21
Concentrated Extract			
5 to 1	gal.	1.30	1.60
15 to 1	gal.	3.35	3.75
20 to 1	gal.	5.20	5.40
30 to 1	gal.	7.25	7.50
Gums—			
Arabic, Amb. Sts.	lb.	.06	.06½
White, powdered	lb.	.08½	.12
Karaya, powdered No. 1	lb.	.09	.12
Tragacanth, Aleppo, No. 1	lb.	.65	.70
Sorts	lb.	.07	.08
Waxes—			
Bayberry, bgs.	lb.	.14	.15
Bees, white	lb.	.30	.33
African, bgs.	lb.	.14	.15
Refined, yel.	lb.	.20	.30
Candelilla, bgs.	lb.	.09	.10
Carnauba, No. 1	lb.	.23	.25
No. 2, Yel.	lb.	.22	.23
No. 3, Chalky	lb.	.12	.13
Japan, cases	lb.	.05¾	.06
Paraffin, ref. 125-130	lb.	.03⅜	.04⅛

COLUMBIA BRAND

98% - 100%
CAUSTIC SODA
76% Na_2O
Solid – Flake
Ground – Liquid

99% - 100%
SODA ASH
58% Na_2O
Light–Dense
Feather

THE COLUMBIA ALKALI CORPORATION
Executive Sales Offices, EMPIRE STATE BUILDING, NEW YORK CITY
Branch Sales Offices
431-451 St. Clair St., CHICAGO; Carew Tower, CINCINNATI; Santa Fe Terminal Bldg., DALLAS
BARBERTON, OHIO

for 95 years

Importers Dealers Brokers

We have been supplying raw materials to the Soap and Allied Industries

OLIVE OIL, all grades
OLIVE OIL FOOTS

Fatty Acids, Animal and Vegetable
Cottonseed Soapstock **Boiled-down Cottonseed Soap**

Neatsfoot Oil
Coconut Oil
Cottonseed Oil
Palm Kernel Oil
Stearic Acid
Oleo Stearine
Soya Bean Oil
Palm Kernel Oil (English or German Denatured)
Rapeseed Oil (Undenatured)
Castor Oil
Sesame Oil
Lard Oil
Palm Oil
Corn Oil
Peanut Oil
Grease (Animal)
Tallow
Red Oil
Soap Colors
Chlorophyll
Soda Ash
Sal Soda
Talc
Trisodium Phosphate
Caustic Potash
Carbonate Potash
Bath Powder
Modified Soda
Caustic Soda
Silicate of Soda
Meta Silicate and Metso

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Established 1838

Opportunities for Export

The following opportunities for export of American soaps and allied products have come to the Bureau of Foreign and Domestic Commerce, Washington, D. C. American manufacturers can secure the full details of the inquiries by communicating with the Bureau, care of the Department of Commerce. Be sure to mention the number of Foreign Trade Opportunity in writing.

*2572	Chemicals for soap manufacture	Sumatra	Agency or purchase
†2611	Soaps and soap products	Philippines	Agency
†2687	Stock dip	Venezuela	Agency or purchase
*2782	Toilet soaps	India	Agency
*2909	Shaving creams	Germany	Agency
*2910	Insecticides	Germany	Agency
†3014	Laundry soaps	Porto Rico	Agency
3881	Glycerin	Peru	Purchase or agency
3906	Toilet soap	Canada	Purchase or agency
3908	Toilet and medicated soaps	Sumatra	Purchase or agency
3915	Toilet and medicated soaps	Sumatra	Purchase or agency
3924	Shaving soaps	Panama	Purchase or agency
4021	Rat poison	Costa Rica	Purchase or agency

—o—

British Survey Coconut Industry

The Empire Marketing Board has issued the second volume of a survey of oil seeds and vegetable oils, which deals specifically with "Coconut Palm Products." These include copra, coconut oil, fresh coconuts, desiccated coconut, coir, and coconut cake and meal. More than 1,000,000 tons of copra are now annually exported from the various producing areas, and of this amount the British Empire furnishes about 40 per cent, principally from the South Sea Islands, Malaya and Ceylon. Ceylon copra realizes a higher price than any other, as it has a superior appearance, a higher oil content, and is more regularly graded before being marketed.

—o—

Consolidated Products Co., New York, used machinery, has issued the first number of *Consolidated News*, a house organ printed in tabloid newspaper style.

—o—

Industrial Cleansers

(*From Page* 19)

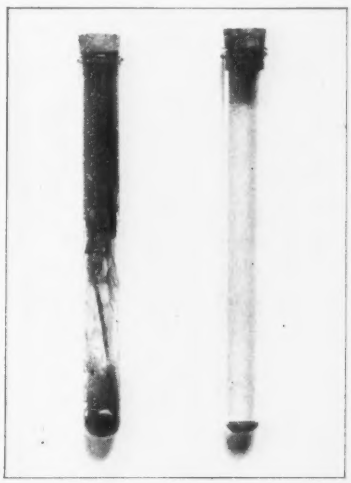
times successive applications. There are other stains, that besides a solvent action, require a bleaching reagent. This action is needed where we have ink stains. A poultice of sodium perborate is one of this type, well adapted to the removal of ink stains. Javelle water is also effective, and also plain ammonia water applied with a piece of cloth. Ammonia water and sal ammoniac are used in cases of copper and bronze stains, as is also potassium cyanide. Tobacco stains can be removed very easily by the use of any of the well known scouring powders, applied in the form of a poultice.

Another excellent poultice for a great many stained conditions, is a combination of trisodium phosphate and chlorinated lime. This is an ideal poultice for urinal stains, as likewise stains resulting from smoke or fires, rotten wood stains, and perspiration stains.

THAT is the kind of assistance American women ask for from the soaps and cleansers they buy for household purposes. From industrial users of soap comes the identical request.

Soap makers know that quick-acting soaps must first wet the goods or surface. This primary principle has long been obtained with the aid of P. Q. Silicate.

Here is a picture of how P. Q. Silicate ("N" Brand) and soap get together when a cleaning job is to be done. Can a P. Q. Silicate help you with a prob'em?



10 cc. heavy lubricating oil and 10 cc. of pure soap solution (1/10 of 1%) were added to each tube. 4 drops of "N" Brand were placed in one tube only. Both tubes were shaken in the same manner and drained—no rinse. Tube on left had only soap; right hand tube contained soap and "N" Brand.

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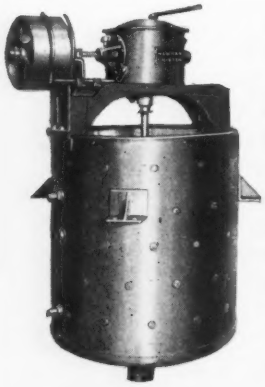
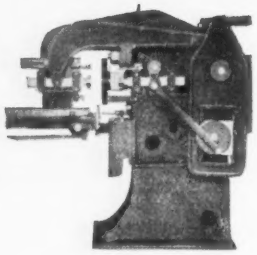
New Soap Crutchers

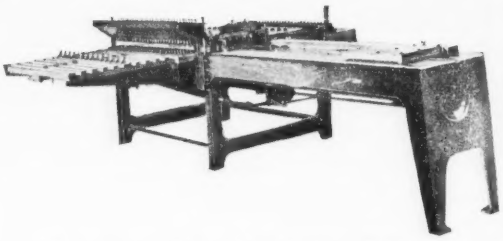


Here are illustrations of two of Newman's brand new all steel, steam jacketed SOAP CRUTCHERS. The CRUTCHER on the left can be used to crutch ANY kind of soap. The CRUTCHER on the right can also be used to crutch any kind of soap but is especially adapted for Crutching laundry soap. These are made in a complete range of sizes. Investigate our equipment and prices before placing your next crutcher order.

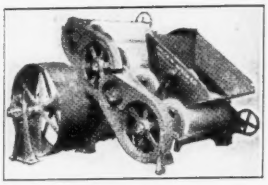
Used Specials



4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.



2 Automatic Power Soap Cutting Tables.



H-A SOAP MILL

This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.

USED EQUIPMENT

- H-A 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
- Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
- Empire State, Dopp & Crosby Foot Presses.
- 2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
- H-A 4 and 5 roll Steel Mills.
- H-A Automatic and Hand-Power slabbers.

USED EQUIPMENT

- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
- Perrin 18 inch Filter Press with Jacketed Plates.
- Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
- Day Grinding and Sifting Machinery.
- Schultz-O'Neill Mills.
- Day Pony Mixers.
- Gardiner Sifter and Mixer.
- Proctor & Schwartz large roll Soap Chip Dryers complete.

USED EQUIPMENT

- Proctor & Schwartz Bar Soap Dryers.
- Blanchard No. 10-A and No. 14 Soap Powder Mills.
- J. H. Day Jaw Soap Crusher.
- H-A 6, 8 and 10 inch Single Screw Plodders.
- Allbright-Nell 10 inch Plodders.
- Filling and Weighing Machines for Flakes, Powders, etc.
- Steel Soap frames, all sizes.
- Steam Jacketed Soap Remelters.
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Oil-Fat-Soap
PRODUCTION SECTION
A section of SOAP devoted to the technology of oils, fats, and soaps. published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Detergency and Adsorption of Soaps

SOAPS manufactured from hardened fish oils, such as herring oil or sardine oil, ordinarily have poor wetting and detergent powers. The presence of large proportions of solid higher fatty acids, such as behenic acid or erucic acid, in the mixed fatty acids of these oils is claimed to be mainly responsible. As experimental study was made by Jiro Mikumo of the adsorption and capillary activity of various soaps, the relation between these two phenomena, and the mechanism of detergency of soaps. According to the article published in the *Journal of the Society of Chemical Industry*, 1933, pages 65 to 68T, the results of this investigation are of some use in selecting and mixing fats and oils for the manufacture of commercial soaps, and in examining the quality of soaps, especially those used in textile industries.

Experiments were first carried out on the adsorption of soap solutions by purified charcoal. The substance adsorbed is claimed to be soap itself from an alcoholic solution. Various fatty acids were used in making the soap solutions, including lauric acid, myristic acid, palmitic acid, stearic acid, separated from beef tallow, and oleic acid. The acid was dissolved in each case in absolute ethyl alcohol and neutralized with alcoholic potash. After distilling off the alcohol, the potash soap was dried under reduced pressure at 100 to 105 C.

Known quantities of alcoholic solutions of soap and charcoal were shaken together in a stoppered glass cylinder for a definite time in a thermostat, and then filtered through a small filter paper. A measured quantity of the filtrate (the first small portion of which has been discarded) was taken. After distilling off the solvent, the residue was decomposed with dilute hydrochloric acid, and the liberated fatty acid was extracted repeatedly with light petroleum (boiling point less than 50 degrees C). By comparing with the corresponding result of a blank test, the quantity and composition of adsorbed substance was determined.

Experiments on adsorption in a single system were carried out by keeping 100 cc. of potassium soap solution and one gram of charcoal with occasional shaking for one hour at 20 degrees C. Adsorption in a binary system was determined by keeping a binary mixture of 100 cc, of soap solutions of equal concentration (.015 mole) in contact with three grams of charcoal for three hours. The iodine value and the neutralization value of the mixed fatty acids obtained from the equilibrium solution and a blank solution were determined.

For any binary mixture of solutions of equal concentration, the higher member in the same homologous series always passes preferentially to the adsorption layer and displaces a part of the lower one from it. Under these experimental conditions the ratio of components adsorbed is approximately 2.2 when the two components are potassium salts of fatty acids in the acetic acid series with a difference of two carbon atoms.

The adsorption from aqueous solutions of single soaps was also studied. Solutions of potasium and sodium oleates were tested with charcoal (Merck and Norite). The latter charcoal was previously washed with boiling water until no chloride was detected in the washings, then treated successively with alcohol and ether, and dried at 110°.

The weighed adsorbent and 50 cc. of soap solution were kept in a stoppered glass bottle for 2 hours at room temperature (20-22°) with occasional shaking and allowed to remain until the froth had subsided. The mixture was filtered, the first small portion of the filtrate was discarded, and the total alkali in 40 cc. of the filtrate and of a control solution was determined by titra-

tion with 0.05*N*-hydrochloric acid (methyl-orange). The liberated oleic acid was extracted repeatedly from the acidified solutions with a large quantity of ether and determined gravimetrically or by titration with 0.05 normal alcoholic potash. As the ratios of alkali and oleic acid in the adsorbed substances were found always to correspond with an acid soap, they were expressed as sodium (or potassium) oleate plus oleic acid.

The substances adsorbed from moderately alkaline media are still acidic. An aqueous solution of soap is always slightly hydrolyzed and the hydrolysis can be made to proceed successively up to a very high degree by disturbing the equilibrium. A comparison of these facts with the preceding results of adsorption by charcoal indicates that the mechanism of the adsorption referred to above must be regarded as a case of hydrolytic adsorption and not exchange adsorption.

Experiments were also carried out on the adsorption from aqueous solutions of binary mixed soaps. A study was made of the free surface or other interfaces with mixed soaps. Mixtures of two soaps widely different in molecular weights were selected, for example potassium soaps of the systems:—lauric acid with erucic acid, and myristic acid with erucic acid.

A transparent mixed solution at room temperature (20 to 22 degrees C) was shaken vigorously in a large separating funnel for five minutes and allowed to remain for 20 to 30 minutes. The bulk of the solution was transferred to another funnel and treated as before, the procedure being repeated several times. The various froth solutions were collected and divided into two portions according to the order of separation. Both the froth solutions and the final residual solution were acidified with dilute hydrochloric acid and the liberated mixed fatty acids were extracted with a large quantity of petroleum (boiling point less than 50 degrees C) and analyzed.

To 100 cc. of a mixed solution was added a known quantity of Merck's charcoal, the mixture as occasionally shaken in a thermostat at 20 degrees C during two hours, allowed to settle for a while and filtered. Then 90 cc. of the filtrate were titrated with tenth normal solution of hydrochloric acid and total alkali was determined. The acidified solution was then treated with light petroleum and the extracted mixed fatty acids were analyzed.

It is evident from these data that in aqueous solutions of binary soap mixtures, the higher soap, *i.e.*, erucate, was always selectively adsorbed at various interfaces, as in the case with alcoholic medium, the adsorbed substance being in the form of acid soap. Similar heterogenous absorption might generally be expected to occur with any mixed solution of different soaps.

SURFACE tension measurements of aqueous solutions of soaps C_2 to C_{22} in wide ranges of temperature and concentration show that high capillary activities are observed in the region C_{12} to C_{18} soaps, and that the activity decreases greatly with the soaps above C_{18}. It has also been ascertained that the capillary activities of binary mixed soaps, especially of behenate (C_{22}) or erucate and other lower soaps, are seriously influenced by the presence of the highest soaps. The result is that the lathering and detergent activities of these systems are also strikingly depressed.

The detergent action of soap involves various factors, since dirts differ widely both chemically and physically. The results of various washing tests with pure soaps and some non-reactive dirts (artificial) indicate, however, that the detergent activity of soap runs generally parallel with capillary activity and that it is very high when the surface tension is lowest. The optimum concentration of soap for the detergent effect is generally 0.2—0.5%, which is also that used in common laundry practice. The lowest concentration of soap which shows the minimum surface tension is generally close to the above figures. It may therefore be inferred that soap has a great detergent activity when adsorption produces prominent capillary activity.

The cleansing activity of soap is, in most cases, high at high temperatures. Further, such a dilute soap solution in its optimum concentration for detergency contains when hot only a small amount of colloids, as has been shown in many instances for various soaps by McBain and his co-workers. As a result of the present work it thus seems most probable that the active detergent agents in a solution of pure soap are principally highly dispersed components, especially simple soap molecules, fatty ions, or very fine colloidal constituents such as acid soap sol. But, since the actual dirts are mostly of an acid-combining nature, the dirt particles are charged in suds, and also colloids are generally easily adsorbed, it may be adequate to conceive that all components of soap solution co-operate in the actual washing.

Moreover, it has been shown earlier that soap is adsorbed by various adsorbents which are common components of fabrics or of dirts. The mechanism of detergent action of soap may therefore be pictured as follows. Soap, principally owing to its high wetting and adsorptive properties and electric peptising power, will form both on the fabric and finely peptised dirt particles adsorbed films, like Hardy's lubricating films; thus the detergent action of soap in its ultimate equilibrium will be expressed by the equation: fabric–dirt + soap = fabric–soap + dirt–soap.

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A new perfume fixative for perfumed toilet soaps is ortho-cyclohexylcyclohexanol as well as derivatives of this substance. About five to fifteen per cent is added. Eau de cologne is fixed in soap by means of this substance. Howards & Sons Ltd., Ilford, Essex, England. British Patent No. 383,472.

—o—

Perfumed toilet soaps are manufactured by adding terpenes, flower waxes or flower resins along with other natural or synthetic perfumes to the stock and then saponifying the mixture. It is claimed that the perfume is better fixed in the soap by this method. United States Patent No. 1,887,743.

Fractional Salting-Out of Mixed Soaps

EXPERIMENTAL proof has been presented to substantiate the fact that the coefficient of neutralization of the fatty acids from soap curd is less than that of the fatty acids from the niger, when coconut oil-tallow soap and the like is salted-out. A systematic investigation, was undertaken to determine the relation between the composition of the soap and the concentration of the salting-out electrolyte.

The coefficient of neutralization of the fatty acids derived from the soap and from the niger on salting-out soaps of various compositions has been determined. These are given in the following tabulation:

Per Cent Soap on Salting Out	NaCl Content in Per Cent	*NN of Tallow Fatty Acids	*NN of Coconut Oil Fatty Acids	Composition of the Soap	*NN of Total Fatty Acids
50	2 to 2.2	201.4	204.8	Tallow soap	202.2
50	2.5 to 3.0	215.9	221.9	80% tallow 20% oil**	216.6
50	4.1 to 4.4	227.5	232.9	60% tallow 40% oil**	228.2
50	4.8 to 5.2	239.4	244.0	40% tallow 60% oil**	241.8
50	5.3 to 5.9	254.3	257.5	20% tallow 80% oil**	266.1
50	5.8 to 6.2	268.1	270.1	Coconut oil	269.0

*NN is the coefficient of neutralization.
**Oil is coconut oil.

As may be seen from the above table fractional salting-out takes place with all kinds of tallow-coconut oil soaps. This makes improbable the assumed formation of complex micellae during the salting-out of such soaps, as advanced by Goldschmidt.

The following results were obtained by salting-out mixed soap, made from 80 per cent tallow and 20 per cent coconut oil, with the aid of salt solutions of varying cencentration:

Concentration of NaCl	*NN of Tallow Fatty Acids	*NN of Coconut Oil Fatty Acids	Difference of the *NN Between Tallow, Coconut Oil Fatty Acids and the Original Soap Fatty Acids	
			Tallow	Coconut Oil
2.0	214.5	219.5	—2.1	2.9
2.5	215.7	222.1	—0.9	5.5
3.0	216.3	223.3	—0.3	6.7
3.4	216.5	228.1	—0.1	11.5

*NN is the coefficient of neutralization.

The results show that the neutralization number of the tallow fatty acids is somewhat lower with coarser salting-out of the soap than that of the original fatty acids, while the neutralization number of the coconut oil fatty acids is considerably greater. The neutralization number of the coconut oil fatty acids decreases very rapidly as the concentration of the salt solution used in salting-out the salt becomes less, while the decrease in the neutralization number of the tallow fatty acids is only very little. The repeated addition of the niger to the next boil causes an increase in the neutralization number of the tallow fatty acids, which reaches a maximum after three to four boils.

Experiments were made to determine whether repeated, partial salting-out can effect separation of the soap fatty acids in the case of a soap made from 80 per cent tallow and 20 per cent coconut oil. The following results were obtained in four tests: Neutralization number of coconut oil fatty acids 220.0, 217.2, 220.7 and 221.7, respectively; neutralization number of tallow fatty acids 211.8, 214.6, 215.7 and 216.6. Hence the degree of fractionation is very little and this method of separating the constituents of soap is practically worthless. Y. Kawakami. *Die Seifen Oel und Fettindustrie,* 1932, 477.

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Wetting Agent from Naphthenic Acid

Naphthenic acids or their esters are treated with reducing agents and the products are converted into water-soluble, sulfuric acid derivatives by means of sulfonation. For example, a pure, commercial naphthenic acid (b.p. 90 to 230 at 13 mm.) is dissolved in double the quantity of three per cent concentrated hydrochloric acid-butyl alcohol solution and heated to boiling for four hours. Butanol and hydrochloric acid are distilled off and 200 kilograms of the naphthenic acid treated in this manner are mixed with 90 kilograms of sodium and 1,000 kilograms of butyl alcohol in an autoclave. The entire mass is then heated with constant agitation to 140 degrees C and maintained there for 1.5 hours. After cooling down to 90 degrees C., the reaction mass is taken up with water, the under-layer is removed, the residue is acidified and washed several times. Then the mass is dried over lime and the excess butyl alcohol is removed by distillation. The finished product boils between 70 and 230 degrees C at 10 mm. pressure and has an acetyl saponification number of 175 and an iodine number of 22. It contains no saponifiable matter and dissolves to a clear solution in concentrated sulfuric acid. No turbidity ensues on dilution with water. The product is converted into the sulfuric acid derivative by slowly adding to it 20 parts of chlorosulfonic acid and then five parts of monohydrate, whereat the temperature rises to 40 degrees C. The product is then washed with salt solution and neutralized. The sulfonate is obtained in solid, pulverizable form by evaporation under a vacuum. It is claimed to possess marked wetting and emulsifying powers, similar to those of a high grade turkey red oil. Deutsche Hydrierwerke A.G., Berlin-Charlottenburg, Germany. German Patent No. 552,535, filed February 28, 1930.

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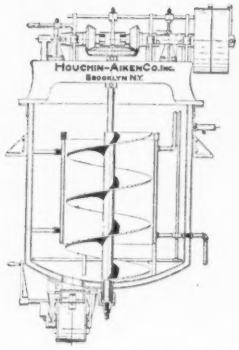
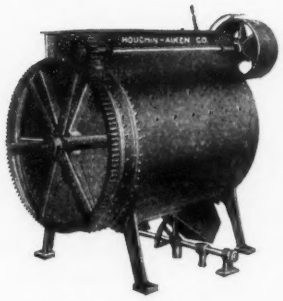
The odor and taste of fish oils are improved without injurying the vitamins contained therein by treating the oils with small quantities of hydrogen gas at low temperatures, for example, 40 to 50 degrees C in the presence of metallic catalysts. The process is caried out under high pressure for example, ten atmospheres. British Patent No. 382,060.

NEW and *USED*
HOUCHIN SOAP MACHINERY

Perfection Crutcher
Sliding Gate Valve



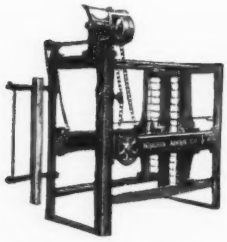
Perfection Crutcher Cross
Section View Plunger
Type Valve



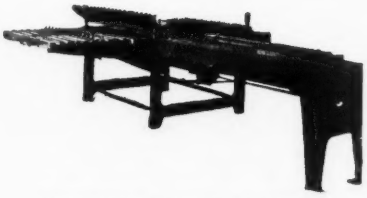
Horizontal Crutcher

Empire State
Press

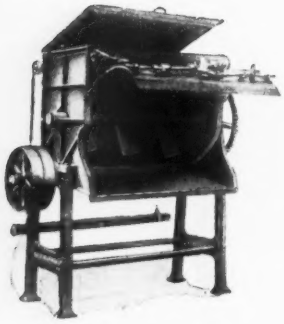
Standard
Soap Frame



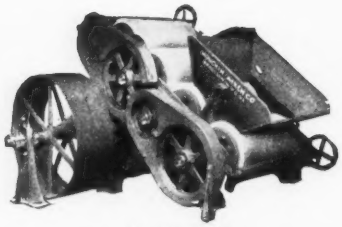
Automatic Power
Slabber



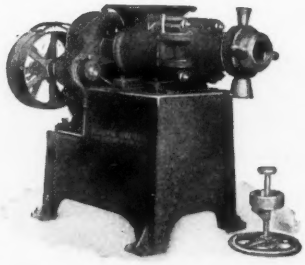
Automatic Power Cutting
Table



Ideal Amalgamator



4-Roll Mill
Mills built with 3 to 12 Chilled
Iron or Granite Rolls



Spur Gear 10" Screw Plodder
Plodders furnished with 2½"
to 12" screws.

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Filterability of Soap Solutions

A study was made of the relation between the filterability of soap solutions and the capacity of the soap for washing out greasy dirt. Filterability is the property of soap for carrying along particles of pulverized substances, such as rust or iron oxide, through the filter paper pores while the soap solution is being filtered. Not all soaps have this power. For example, this is true of rosin soaps. Soaps made from naphthenic acids possess this property in marked degree. On the other hand, soaps made from high molecular weight oxy-fatty acids do not, and this also applies to soaps made from ricinoleic acids and dioxystearic acid. Aqueous solutions of saponin of half to one per cent concentration are not filterable. When sodium carbonate is allowed to act on rosin soap, the latter attains the power of filtering pulverized substances. On the other hand, similar treatment of a solution of castor oil soap does not have any effect. Experiments were also carried out on the influence of certain electrolytes on the lathering quality of soap solutions. The addition of sodium bicarbonate in the ratio of 1:1 to a soap solution containing oleate soap has no appreciable action on the filterability of the solution. It has no action on castor oil soap. The conclusion is reached that an increase in the lathering quality of the soap solution is generally reflected in a similar increase in its filterability and vice versa, but there are cases where there is no connection between these characteristics of soap solutions. Numerous experiments were made with various electrolytes and olein, rosin and castor oil soaps. Manganese dioxide powder was used in the filterability tests. The effect of the addition of various electrolytes to various soap solutions was determined and reported in the original article in tabulated form. Rapidity of the settling of the manganese dioxide powder in such test solutions was studied. B. Tjutjunnikow and N. Kasjanowa. *Allgemeine Fett und Oel Zeitung*, 1933, 11-19.

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Soft Soda Soap

Soft soda soap is made by mixing a soda soap base with an alkali metaphosphate in the proportion of five to fifteen per cent and by adding sufficient water during the mixing process to attain the desired consistency. The soda soap base may be of the ordinary type, containing 60 to 65 per cent of fatty acids. The surprising fact is that the addition of a metaphosphate softens the soap, while ortho-phosphate and pyrophosphate, while enhancing the detergent quality of the soap, have no softening action. Thus, when the soda soap is mixed with disodium phosphate, the mixture becomes hard after a day or two in spite of the addition of water, while it remains permanently plastic and soft when the same quantity of metaphosphate is added. For example, 100 kilograms of soda soap are mixed with 10 kilograms of sodium metaphosphate. The mixture is worked up into a plastic, uniform mass in a kneading machine or the like, and then water is added in sufficient proportion to give a soft soap of suitable consistency. In order to maintain a certain degree of alkalinity in the soap, it is sometimes desirable to add small quantities of trisodium phosphate. German Patent No. 571,738, filed February 3, 1932. Chemische Fabrik Joh. A. Benckiser G.m.b.H., Ludwigshafen am Rhein, Germany.

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Non-Gelatinizing Liquid Soap

Highly-concentrated, liquid, potash soap is obtained in a non-gelatinizing form by the addition of small quantities of hydroxylated or sulfonated oils as well as of water-insoluble, unsaponifiable oils during or after saponification. These oils do not have to be exclusively fat solvents. The proportion added varies between one and five per cent and should never be greater than seven per cent. These oils affect the micro-structure of the colloidal potash soap. The small quantity used avoids any detrimental action on the lathering quality of the soap. The oils may also be added to a finished, soft soap, which is reliquefied by melting. Thus, for example, a soft soap, made from linseed oil or soya bean oil, is heated on the water bath. When it has become liquid, seven parts of a mixture consisting of about four parts of turkey red oil, two parts of liquid petrolatum and one part of terpineol are added. The soap is then allowed to cool. It does not return to its original gelatinized condition but forms a clear, thickly-viscous mass. The further addition of small quantities of carbamide or its water-soluble derivatives to the sulfonated or hydroxylated oils improves the quality of the soap and make it more mobile. When such soap is stored, small quantities of ammonia soap are formed. Its odor is not noticeable, but the ammonia soap has some effect on the progressive liquefaction of the soap. The liquid state of the soap remains unchanged when various organic solvents such as benzine, or disinfecting fluids, such as tar, are added. German Patent No. 560,980, filed December 31, 1931. Dr. J. Schaffner & Co., G.m.b.H., Berlin-Gruenewald, Germany.

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Removing Antioxidants from Fatty Oils

The natural antioxidant present in olive and linseed oils can be removed for the most part by boiling the oils with water. In this process, however, they appear to be decomposed or oxidized, since the material recovered from the aqueous extracts does not confer resistance to absorption of oxygen when added to an unsaturated fatty oil. The addition of about 0.03 per cent of quinol to olive oil from which the natural antioxidant has been removed produced a resistance to oxygen absorption of about the same order as that of the original oil, but the form of the oxygen absorption-time curves was not the same in both cases. Expressed Argentine linseed oil, which frequently exhibits marked resistance to atmospheric oxidation, can be rendered readily amenable to the latter by repeated agitation with boiling water. A. Banks and T. P. Hilditch. *Journal of the Society of Chemical Industry*, volume 51, pages 411 to 414T.

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Determination of Lime Soap in Oils

A new, rapid and accurate method has been worked out by Dr. J. Davidsohn for the determination of the alkali and lime soap content of fats and oils. The acid number of the fat or oil is determined in the usual manner by dissolving the sample in a mixture of 90 per cent benzine (sp. gr. 0.7) and 10 per cent absolute alcohol at the boiling point, filtering, washing with the same mixed solvent and titrating with tenth-normal alkali solution after the addition of 50 per cent alcohol. A second sample of the oil is heated for 30 minutes in a flask, provided with a reflux condenser, after the addition of 50. cc. of ether, which has previously been mixed with 2 cc. of hydrochloric acid (s. gr. 1.19). The entire mass is then transferred to a separatory funnel, washed with ether and the solution thereafter washed with water until the wash water no longer has an acid reaction. The ether is then distilled off, the residue taken up in 96 per cent alcohol and titrated with tenth normal alkali solution against phenolphthalein as indicator.

The difference between the two acid numbers gives the content of alkali soap or lime soap, calculated as follows. The acid number 1 corresponds to 0.18 cc. of tenth normal solution of alkali and 1 cc. of tenth normal alkali corresponds to 0.0302 gram of soda soap or 0.0318 gram of potash soap or 0.0299 gram of lime soap, when the average molecular weight of the fatty acids is assumed to be 280. For example, the difference between the two acid numbers is 3.66. The soda soap content is then 3.66 x 0.18 x 0.0302 x 100 or 1.98 per cent; the potash soap content is 3.66 x 0.18 x 0.0318 x 100 or 2.09 per cent and the lime soap content is 3.66 x 0.18 x 0.0299 x 100 or 1.96 per cent.

The difference between the two acid numbers is calculated on the basis of soda soap, potash soap or lime soap, depending on the results of a qualitative test of the fat to determine which soap is present in it. The presence of lime soap is established by boiling the fat with dilute hydrochloric acid and then filtering through filter paper previously moistened with water. The filtrate is made alkaline with ammonia and boiled. If a precipitate is formed, which is due to the iron and aluminum compounds present as impurities in the fat, then the solution is filtered and mixed with a few drops of approximately ten per cent ammonium oxalate. A white turbidity or precipitate indicates the presence of lime soap. The presence of soda or potash soap in the fat is determined by ashing the same and then testing the ash by flame reaction.

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The CNS value for a "polymerized" linseed oil is not constant, but depends on the concentration of the reagent, its excess, the time of interaction, and on some factor dependent on a balanced reaction, and has therefore no constant relationship to the degree of unsaturation, too high values being obtained. Some decomposition of the $(CNS)_2$ occurs, which is greater the higher the degree of polymerization, but is unaffected by the non-saponifiable portion of the oil. Similar results are obtained with an oil polymerized in a vacuum, but more reliable values are obtained with the total fatty acids of the oil or with their esters. No decomposition of the reagent occurs in this case, and lower values tending to a constant after 72 hours treatment are obtained. A. Steger and J. van Loon, *Receuil des Travaux Chimiques*, 1932, volume 51, pages 996 to 100.

——o——

Continuous Fat Extraction

An apparatus for the continuous extraction of seeds and similar materials with a solvent consists of a rotatable drum with permeable walls, through which the extract is filtered. A pretreating drum may be provided in which the seeds are impregnated with the solvent and the saturated raw material is then fed axially into the filtering drum. The material is fed into a hopper at one end of the apparatus and is taken up by a screw-conveyor mounted on a central hollow shaft, extending through the entire apparatus. The material is thus carried into a rotating drum where it is impregnated with a solvent admitted through the hollow shaft. Mixing is facilitated by helical blades attached to the common shaft. The mass is then carried by another screw conveyor into a rotating filtering drum mounted in a stationary casing. The common shaft extends as well into this apparatus and to it are attached blades which mix the mass with additional solvent. The extract filters through the permeable wall of the filtering drum which consists of silk impregnated against moisture and is finally removed through the far end of the apparatus and distilled. The residue in the drum is removed and may be extracted or pressed again to yield an additional quantity of extract. P. L. Fauth Gesellschaft, Wiesbaden, Germany. British Patent No. 357,172.

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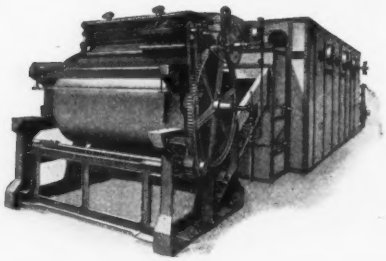
Castor oil is heated at 200 to 250 degrees C in the presence of a substance which retards thickening or gelatinization, until a product with an acid number of about 30 or less is obtained. The added substance may be a fatty oil, such as linseed oil, naphthenic acid, a natural or synthetic resin, a polyhydric alcohol, an alkaline earth hydroxide, sulfur or selenium or a compound of these metals, a halogen, or a primary aromatic amine. The products obtained by this process resemble china wood oil. Johannes Scheiber, German Patent No. 555,496 filed December 17, 1929.

——o——

Cottonseed oil was cracked by the non-residium method at a pressure of 9.5 kgs. per sq. cm. and over a temperature range of 445 to 485 degrees C. Products of cracking were examined and pressure distillate oil analyzed. It contains motor fuel and Diesel or gas oil. It was fractionated. Yield of unrefined motor fuel was 58.7 per cent of cottonseed oil. Cracked distillate was refined and properties of cracked motor fuel determined. G. Egloff and J. C. Morrell. *Industrial & Engineering Chemistry*, 1932, pages 1426 to 1427.



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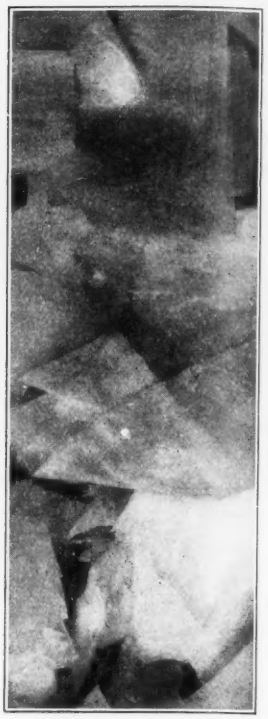

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ON PRODUCTS AND PROCESSES

Super-fatting agents, which are used in the manufacture of soaps, include a mixture of wool fats, spermacetti and bottle-nose whale oil, or refined products obtained therefrom, or the corresponding esters produced synthetically. The super-fatting agents are able to bind large quantities of water. Bottle-nose whale oil may be replaced, wholly or in part, by spermacetti oil. Waxes and fats, such as rump gland fat, Chinese insect wax, poylla wax, beeswax, palm wax or curcas wax may be added. British Patent No. 380,232.

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Consistent values for the hexabromide index (weight of acid hexabromides insoluble in ethyl ether from 100 grams of oil) are obtained by a technic recently described. The essential factor is the drop by drop addition, with constant agitation, of bromine in dilute ether solution to the acids (from hydrolysis) also in ethyl ether solution at zero degrees C. Lower temperatures are unnecessary, and the yield is almost unaffected by the volume of ethyl ether used to wash the precipitated hexabromide or by the temperature of filtration. Addition of acetic acid gives unreliable results since crystallization of the hexabromide is retarded. The precipitate should be dried at a temperature of 105 to 110 degrees C, at which temperature it is quite stable. This is contrary to what has been considered good practice. M. Lombard. *Ann. Falsif.*, 1932, volume 25, pages 462 to 468.

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Wetting, cleansing and dispersing agents are manufactured by transforming aliphatic di- or poly-hydroxylated compounds of high molecular weight, or the esters of such compounds with mineral or carboxylic acids, into unsaturated compounds, which still contain at least one hydroxyl group or a mineral ester group. These compounds are made soluble in water, if not already so, by treatment with polybasic inorganic acids or derivatives of these acids. For example, 1:8-octadecanediol is heated with chloroacetic acid to a temperature of 200 degrees C. The chloroacetate, which is formed in this manner, is saponified by boiling with an aqueous solution of sodium hydroxide. The unsaturated alcohol which is thus obtained is treated with chlorosulfonic acid, a mixture of chlorosulfonic acid and sulfuric acid or phosphorus pentoxide. The acetate of 1:8-octadecanediol is also used as a starting material. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. French Patent No. 735,235.

An anhydrous detergent, which is readily soluble in water, is made by mixing three-quarters to 1.18 molecular weights of alkali metal carbonate with one molecular weight of silica. The mixture is then fused, preferably in a reverberatory furnace, so as to drive off the carbon dioxide, and is finely ground. Potassium or sodium carbonate may be used. Traces of iron or aluminum compounds may be removed as volatile chlorides by adding the chemically equivalent amount of sodium chloride to the fusion mixture. The silica may be pretreated with a mineral acid to remove calcium compounds. The product is ground preferably to pass a 10-mesh sieve and may be mixed with soaps or suds. British Patent No. 357,224.

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The presence of rosin in soap cannot be established by the red color which is produced by the action of concentrated sulfuric acid on an alcoholic solution containing rosin and a little furfurol. Soap, which is made from coconut oil, gives exactly the same reaction. The soap may be dissolved in 3 cc. of chloroform and 5 cc. of sulfuric acid (density 1.57) are added. A few drops of acetic anhydride color the chloroform violet and the sulfuric acid red. When the colors are compared with those obtained with a solution of rosin in chloroform, the proportion of rosin can be estimated but not very accurately. The test solution is non-resistant to light and the presence of nitrites interferes with the reaction. F. Beek. *Pharmaceutisch Weekblad*, volume 69, pages 1030 to 1032.

——o——

Attention is called to a new method for the removal of mucilaginous substances from castor oil. Details of the method are withheld for the present on account of the patent situation, but the results obtained with it are described. It is claimed that the new method does not impair the quality of the castor oil and effectively removes the mucilaginous impurities. Dr. F. Wittka. *Allgemeine Oel und Fett Zeitung*, volume 30, 1933, pages 5 to 10.

——o——

Wool fat or a wax is heated with caustic alkali in an autoclave with resulting saponification. The hot saponified mass is sprayed into a receiver and the finely divided flocculent powder is extracted with acetone or other suitable solvent. I. G. Farbenindustrie A.G., Frankfurt-am-Main, Germany. United States Patent No. 1,878,940.

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Refining Edible Oils

The fishy taste in refined edible oils is claimed to be due to some residual soap that is left in the oil from the neutralization process. Some or all of this soap is subsequently decomposed under the action of the bleaching earth and the fatty acid liberated is directly responsible for the fishy taste. Another theory is that the bleaching operation is not very helpful when it comes prior to neutralization. Linseed oil, treated with bleaching earth only, without deacidifying in the usual manner, had no unpleasant fishy taste. Furthermore, when the oil is deacidified and then treated with a few drops of sulfuric acid in the warm and finally bleached with bleaching earths, a satisfactory product with neutral taste is obtained. Traces of soap are also held to be absorbed by the oil in the bleaching process and could only be split up when bleaching takes too long or other conditions are unsuitable. Free fatty acids may then affect the taste of the oil, but the oxidation of the acids is very unlikely if bleaching is done under vacuum.

Even if fatty acids are split off, it does not follow that they are responsible for the fishy taste, and they should, in any case, be removed in the deodorizing process. The difficultly-removable, albumenous matter in linseed oil is the direct cause of any unpleasant flavor. It has also been shown that bleaching earths are not such efficient carriers of oxygen as they are sometimes supposed to be, and that most oils and fats, when agitated under atmospheric pressure without the addition of bleaching earth, form oxygen compounds, which show the Kreis reaction. This reaction is less marked when bleaching earths are used, so that the latter may be assumed to be either antioxidants or have the property of reducing oxidation in air-stirred oil. It was found that the oil extracted from the residues gives the Kreis reaction much more strongly than the bleached and filtered oil. This would appear to indicate that the oxidation products formed accumulate on the bleaching earth.

It may also be concluded that the unpleasant taste of an oil is due mainly to insufficient preliminary treatment. Since according to best modern practice in oil refining, air is excluded as much as possible during bleaching, it cannot be assumed that oxidation of soap residues can materially affect the taste of an edible oil in the process of bleaching. Another view is that oxidation is not entirely excluded especially during filtration of the oil. Linseed oil, being a drying oil, is especially sensitive to oxidation and deterioration, no matter how much care is used in its refining. This is particularly true when the oil is refined in the presence of iron or copper, which acts as a catalyst.

The action of micro-organisms is also an important factor in the development of a bad taste in edible oils. Unless albumenous matter is removed from the oil, it acts as a very favorable nutrient medium for the growth of bacteria. It is evident that there are many unfavorable circumstances that can exist and cause bad taste in oils, and it is necessary to consider each oil separately due to its inherent peculiarities. Finally it may be mentioned that partial hydrogenation has been suggested for treating the edible oil to reduce rancidity and other forms of deterioration.—*Seifensieder Zeitung*, 1932, 375, 475, 576; *Allgemeine Oel and Fett Zeitung*, 1932, 339.

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Kusum Oil Soap

Kusum oil (macasser oil) has been suggested for soap making. This oil is extracted from the fruit of the kusum tree, growing in Bengal, India. Yield of oil by pressing is 43 per cent on dried kernel free of shell. The saponification number of the oil is 215.8. It can be saponified both by the hot and cold process. The difference between the saponification and iodine numbers of the oil (I. N. S. number) is 158, very close to that of tallow. Kusum oil soap is not easy to make from a hundred per cent kusum oil stock, or is the soap advantageous to use. The usefulness of kusum oil is said to lie in its admixture with other fats and oils in making up the stock. In proportions of two to fifteen per cent of the stock, the oil serves to soften and improve to a considerable degree the lathering quality of the soap by ensuring the production of plentiful, voluminous lather. The soap has a nice feel. Soaps containing kusum oil are also claimed to be free from rancidity. The oil may be used in small proportions, two to five per cent, in making the base for toilet soaps of high lathering properties. It has been suggested as a substitute for soya bean oil and coconut oil in making soap. *The Perfumery and Essential Oil Record*, 1932, pages 427 to 428.

—o—

Sterilized soaps are made with the addition of higher homologues of hydrocupreine or of the quinatoxins, for example, iso-octyl hydrocupreine or iso-amyl hydrocupreine. These substances are used in very small proportions in admixture with carboxylic acids, other than benzoic acid, or their derivatives, including those of benzoic acid. The carboxylic acids used include annamic acid, and their derivatives include the esters or the hydroxy acids, for example, para-oxybenzoic acid, salicyclic acid, and the methyl, ethyl, or propyl esters of benzoic acid. The mixture may be used by dissolving it in materials such as oils, fats, which are used in the manufacture of the soap. Pharmaceutical Corporation, Ltd., London, England. British Patent No. 385,323.

—o—

Effect of terpenes, hydrocarbons, alcohols, aldehydes, ketones, acids and phenol derivatives on the oxidation of linseed oil is studied, and 31 compounds are listed. Terpene alcohols are mostly inactive. Ethers of monohydric phenols, aromatic aldehydes (but not citronellal), isosafrol, and aromatic ketones accelerate oxidation. Derivatives of dihydric phenols such as eugenol, isoeugenol, etc., are strong antioxidants. T. Y. Tanaka and M. Nakamura. *Journal of the Society of Chemical Industry of Japan*, 1932, volume 35, pages 81 to 82B.

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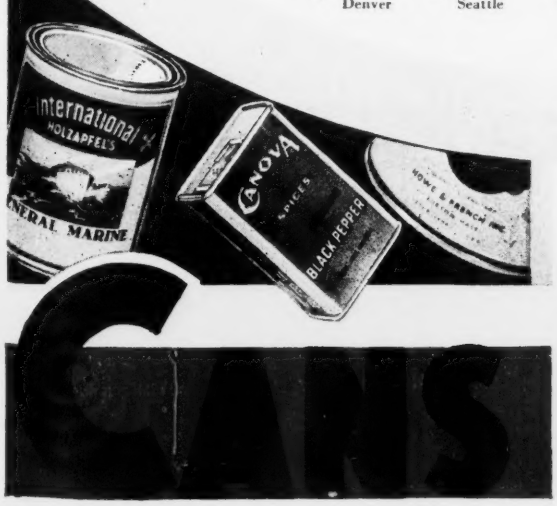

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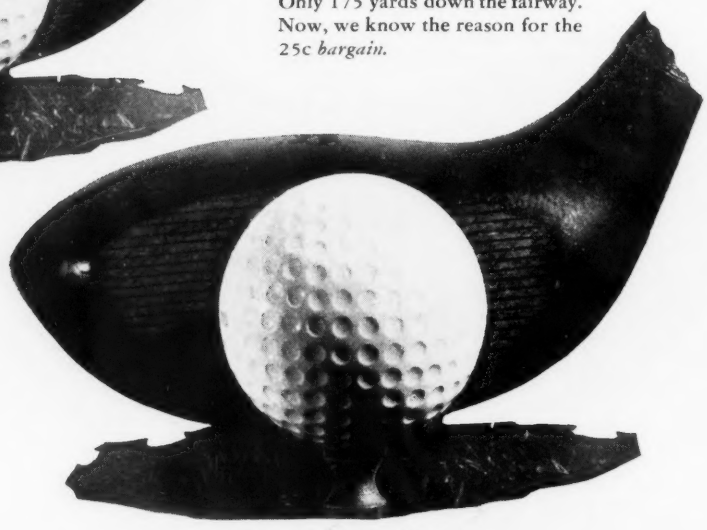

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REMEMBER, if you want to be sure of your finished product, use Pyrocide 20.

Write today, McLAUGHLIN GORMLEY KING CO., 1715 Fifth Street S.E., Minneapolis, Minnesota
Pyrethrum Specialists Since 1901

PYROCIDE 20
STANDARDIZED EXTRACT OF PYRETHRUM FLOWERS

Announcing....

DEO-BASE

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Deodorized Base for Fly Sprays

DEO-BASE is a petroleum oil produced and refined to complete freedom from Kerosene odor, making it the best product available today for use in fly sprays and other spray insecticides.

The modern prerequisite is that a fly spray be odorless—or that it be very slightly and pleasantly perfumed.

Neither is possible if ordinary Kerosene is used.

DEO-BASE is especially well adapted for use with odorless pyrethrum extracts.

DEO-BASE offers new sales opportunities and therefore increased profits for you.

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DEO-BASE conforms in every detail with the specifications of the National Association of Insecticide & Disinfectant Manufacturers.

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Refiners of White Oils and Petrolatums

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And they do it better . . . because of uniform penetration of the crystals . . . more effective perfuming oils.

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FLY SPRAY

REQUEST SAMPLES OF

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STAINLESS CATTLE SPRAY

A light colored liquid for spraying cattle to rid them of annoying flies and insects. Contains the active principle of pyrethrum. Will not stain, blister or burn, and has no disagreeable odor. A popular product with farmers and dairymen. Supplied in bulk to the distributing trade only.

PES-TOX

An efficient liquid household insecticide of the pyrethrum type, pleasantly scented. Surpasses in effectiveness the standard of the National Association of Insecticide and Disinfectant Manufacturers. Each lot carefully controlled by the Peet - Grady method. Supplied in bulk for distributors to resell under their own trade-names. Also suppliers of pyrethrum concentrate.

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PINE OIL DISINFECTANTS

made from pure steam-distilled pine oil, and agreeable in odor and dilute with water to form rich, milk-white emulsions.

HIPINE, made according to the formula of the Hygienic Laboratory has a phenol coefficient of four to five.

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CLEARPINE is a specially refined product, very light in color, and has a phenol coefficient of four to five.

All are high-grade products, reasonably priced. Every lot chemically controlled and standardized. Supplied only in bulk to the distributing trade for resale under their own names and labels.

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An INVITATION

to the members of the NATIONAL ASSOCIATION OF INSECTICIDE and DISINFECTANT MANUFACTURERS, INC.

to hold their December meeting

in BERMUDA

NEXT December come to Bermuda . . . for the finest meeting the Association has ever held!

Combine business with pleasure as you enjoy the delights of a transatlantic voyage on the magnificent "Queen of Bermuda" or "Monarch of Bermuda."

In Bermuda, carry on business at a fine hotel, with "off hours" for members and their families to "do" the islands at the gayest winter season.

Never before has the Association held a meeting which will compare with this one. And best of all—through special arrangements with the Furness Bermuda Line—the Association can obtain a low all-inclusive group rate . . . covering everything except tips . . . comparing favorably with the actual cost per member of usual meetings.

A few reasons why the Association should decide to hold next winter's meeting in Bermuda

*AMAZINGLY LOW *ALL-INCLUSIVE* COST which may be figured *in advance*. $90 per member for a 6-day meeting, covering all expenses: Meals and large outside room with bath on the ship, and meals and accommodations at a fine Bermuda hotel. Entertainment afloat and ashore, golf tournament, sightseeing, swimming, carriage drives . . . everything, even the Annual Banquet the last night ashore included in the rate!

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Members in the West and South will enjoy a reduction in round trip rail fare which is only fare and a half when taken in connection with steamship bookings. This saving brings the cost of the Bermuda meeting down to almost the same as a New York convention for those members.

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EXCELLENT FACILITIES FOR BUSINESS on shipboard. Various completely equipped meeting rooms accommodating from 50 to 250 persons. Also large hall with facilities for "talkies" and broadcasting. SHIP-to-SHORE phone to keep in touch with the office.

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GROUPS KEPT INTACT aboard ship. All members available at any time for general and committee meetings—and may be assembled quickly by a broadcasting system which covers all public rooms.

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OPPORTUNITY TO VISIT BERMUDA at much lower cost than would be possible for individual travel.

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LARGE ATTENDANCE ASSURED. The novelty of a sea-going meeting to foreign shores will appeal to members and attract a large and enthusiastic gathering.

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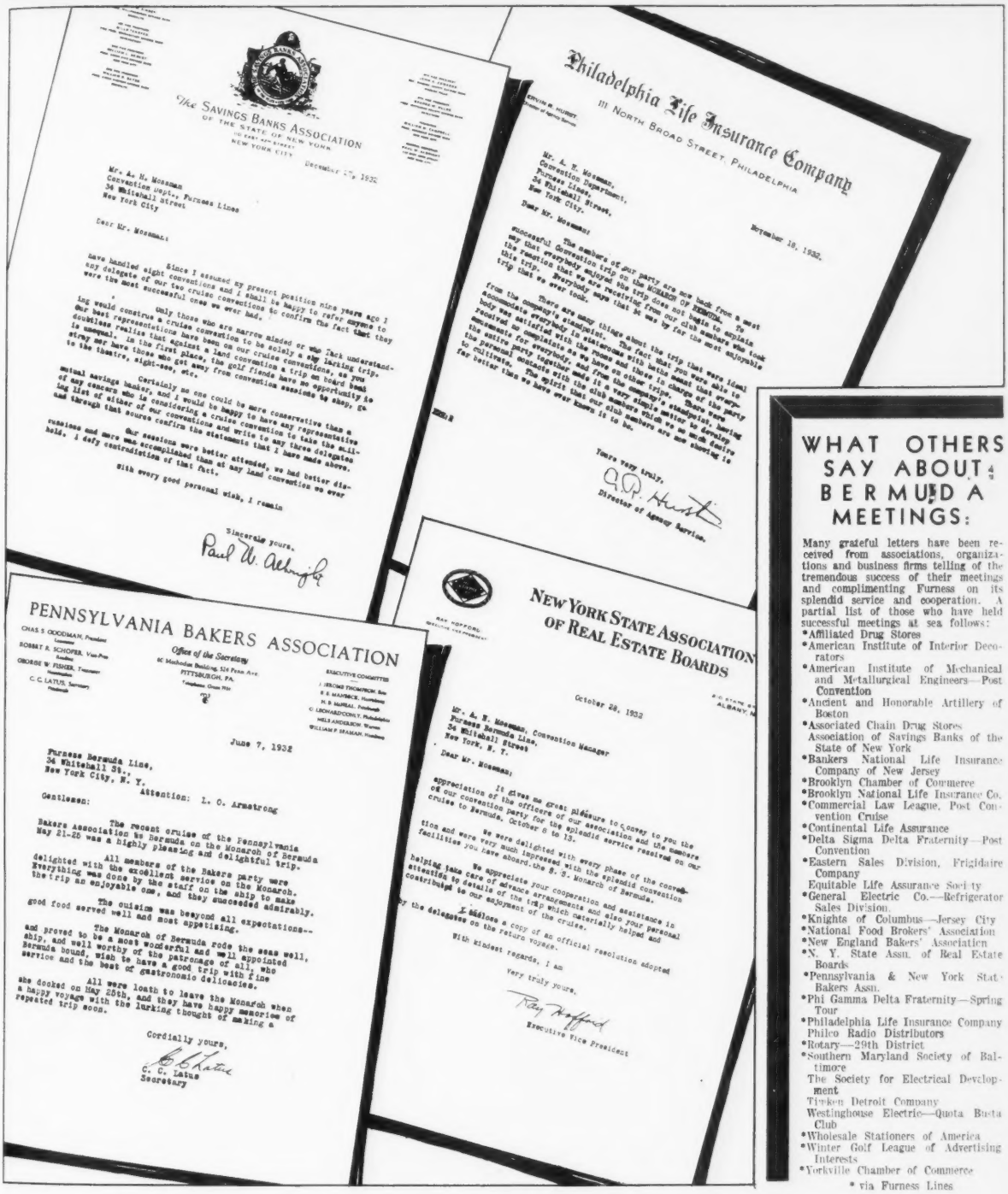
HEALTHFUL SEA VOYAGE. Members and their families will benefit from invigorating salt-sea-air, also complete change and rest afforded by voyage. Both vessels over 22,400 tons assure the utmost steadiness and comfort.

*Compare this total outlay with the cost per member of other meetings, remembering that usual expenses for entertainment, banquets, theatres, etc., are all eliminated.


The Savings Banks Association
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111 North Broad Street, Philadelphia
PENNSYLVANIA BAKERS ASSOCIATION
Office of the Secretary
New York State Association
of Real Estate Boards

WHAT OTHERS SAY ABOUT BERMUDA MEETINGS:

Many grateful letters have been received from associations, organizations and business firms telling of the tremendous success of their meetings and complimenting Furness on its splendid service and cooperation. A partial list of those who have held successful meetings at sea follows:

- *Affiliated Drug Stores
- *American Institute of Interior Decorators
- *American Institute of Mechanical and Metallurgical Engineers—Post Convention
- *Ancient and Honorable Artillery of Boston
- *Associated Chain Drug Stores
- Association of Savings Banks of the State of New York
- *Bankers National Life Insurance Company of New Jersey
- *Brooklyn Chamber of Commerce
- *Brooklyn National Life Insurance Co.
- *Commercial Law League, Post Convention Cruise
- *Continental Life Assurance
- *Delta Sigma Delta Fraternity—Post Convention
- *Eastern Sales Division, Frigidaire Company
- Equitable Life Assurance Society
- *General Electric Co.—Refrigerator Sales Division.
- *Knights of Columbus—Jersey City
- *National Food Brokers' Association
- *New England Bakers' Association
- *N. Y. State Assn. of Real Estate Boards
- *Pennsylvania & New York State Bakers Assn.
- *Phi Gamma Delta Fraternity—Spring Tour
- *Philadelphia Life Insurance Company
- Philco Radio Distributors
- *Rotary—29th District
- *Southern Maryland Society of Baltimore
- The Society for Electrical Development
- Timken Detroit Company
- Westinghouse Electric—Quota Busta Club
- *Wholesale Stationers of America
- *Winter Golf League of Advertising Interests
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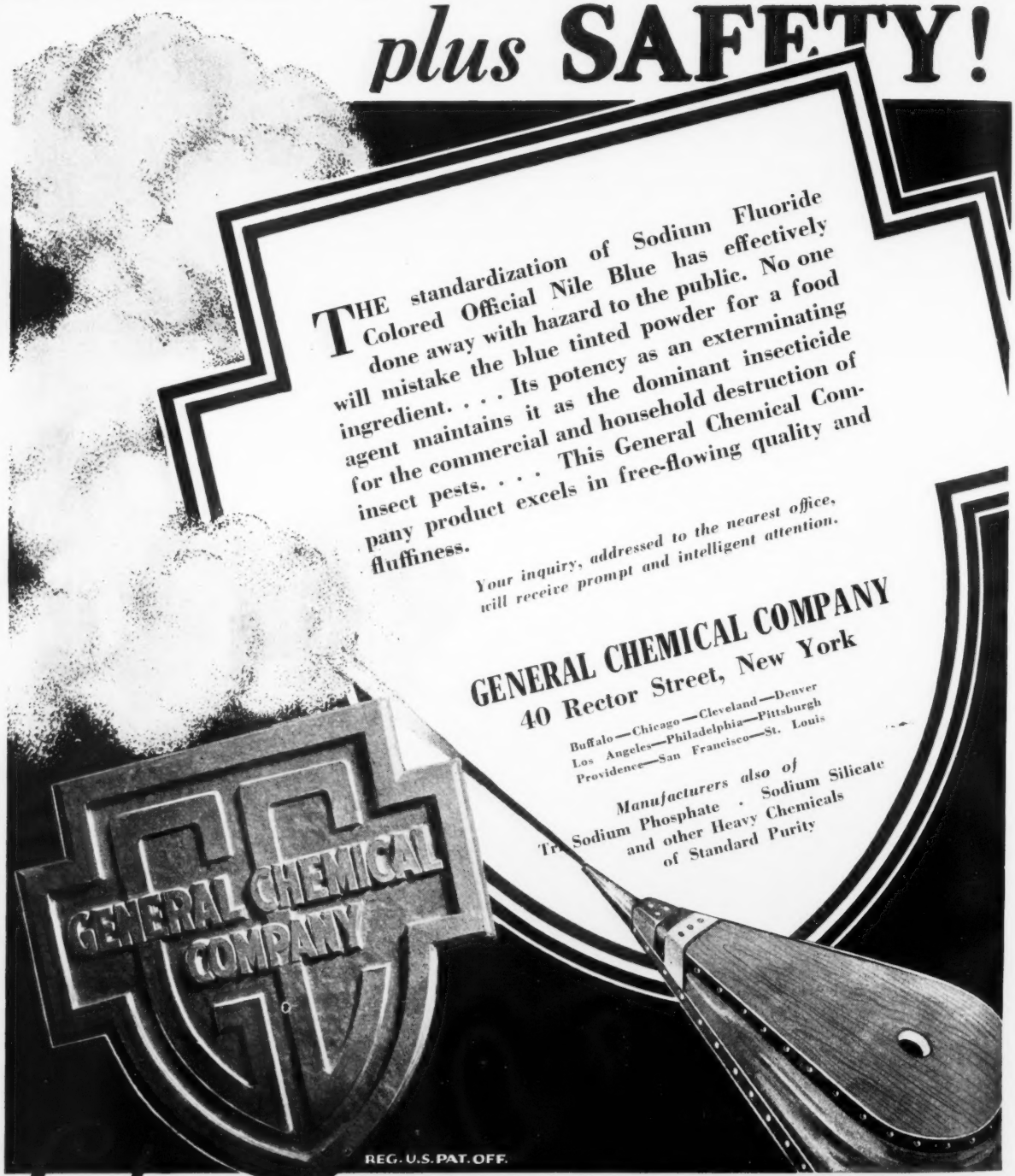
For further information, apply Convention Department, 307 North Michigan Ave., Chicago, Illinois, or 34 Whitehall Street, New York City.

FURNESS

Bermuda Line

Effective Extermination *plus* SAFETY!



THE standardization of Sodium Fluoride Colored Official Nile Blue has effectively done away with hazard to the public. No one will mistake the blue tinted powder for a food ingredient. . . . Its potency as an exterminating agent maintains it as the dominant insecticide for the commercial and household destruction of insect pests. . . . This General Chemical Company product excels in free-flowing quality and fluffiness.

Your inquiry, addressed to the nearest office, will receive prompt and intelligent attention.

GENERAL CHEMICAL COMPANY
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Manufacturers also of
Sodium Phosphate · Sodium Silicate
and other Heavy Chemicals
of Standard Purity

Colored OFFICIAL NILE BLUE SODIUM FLUORIDE

The Original Fly Spray Perfumes

BOUQUET No. 77

Produces a very fine lilac like odor in all fly sprays in which kerosene or petroleum distillate is used as a base. Only one ounce necessary to perfume one gallon of spray. Guaranteed not to stain.

BLEND No. 7

For those who desire a lower priced product which still possesses the features which have made Bouquet No. 77 extremely popular.

Both Bouquet No. 77 and Blend No. 7

are odors from which you can make sprays suitable for use anywhere. Especially recommended for use where food products are stored. sold or used.

On request we will send an interesting leaflet fully describing perfumes for deodorizing crystals or blocks, fly sprays and theatre sprays. Samples of these products will be furnished on application.

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P. R. DREYER INC.

12 East 12th Street New York

"IT'S THE ODOR THAT SELLS THE PRODUCT"

Specialists in doing
one thing well

Baird's

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For over a quarter
century manufacturers of

TESTED and CERTIFIED

DISINFECTANTS

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BAIRD & McGUIRE, Inc.

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MEMBER
NATIONAL INSECTICIDE AND DISINFECTANT MFRS. INC.
INC. 1914

INSECTICIDE AND DISINFECTANT SECTION

A Department of SOAP

SOAP is official publication of *The National Assn. of Insecticide and Disinfectant Manufacturers.*

EDITORIAL

THE ANNUAL mid-year convention of the National Association of Insecticide & Disinfectant Manufacturers will be held for the seventh consecutive year at the Edgewater Beach Hotel in Chicago. The dates are June 5 and 6. This year will mark the nineteenth annual summer meeting. Next December, the Association will celebrate the twentieth anniversary of its founding. Plans for the Chicago meeting, which will be held shortly after the opening of the Century of Progress Exposition, are somewhat more elaborate than in previous years. There will be a full two-day program of addresses, reports and discussions, topped off by the mid-year banquet this time in the form of a beefsteak dinner. The papers and discussions will include the new steam vaporizing machines, pyrethrum and concentrates, chlorine disinfectants, self-polishing floor waxes, market analyses, moth preventives, possible changes in the Insecticide Act, packaging, advertising, credits, and other subjects.

This year, attendance at the convention permits of the opportunity to visit the Century of Progress Exposition while in Chicago. At the Edgewater Beach Hotel, there will be no change in the rates on account of the Exposition which the membership has paid in prior years. The registration fee for luncheons and banquet has been reduced in keeping with the times. A wider program of entertainment has been planned than ever before. Altogether, it will be a mighty profitable and pleasant meeting to attend. If you are not a member of the Association and are engaged in the insecticide, disinfectant, or associated groups, a communication to Secretary Harry W. Cole at Holbrook, Mass., will bring you further details regarding your eligibility for a card of admission to the meetings.

—o—

Already the new steam vaporizing machines are stirring up considerable of a controversy in the insecticide and disinfectant fields. Irrespective of the arguments in the controversy, if this new type of machine stimulates interest in and expands the sale of insecticides this season, it should be welcome. After the 1932 retail season, the insecticide industry could very nicely use some new business.

—o—

The type of insecticide product which seems to be forging to the front more rapidly than any other right now is the modern pyrethrum cattle spray. It is fast replacing the old-type spray and seems to be gaining ever increasing popularity.

—o—

Don't forget Chicago, June 5 and 6. Plan to arrive at the Edgewater Beach on June 4.

The Edgewater Beach Hotel, Chicago, where the nineteenth annual mid-year meeting will be held June 5 and 6. This is the seventh time the Association has met at the Edgewater Beach.

Program for 19th Mid-Year Insecticide & Disinfectant Meeting

THE nineteenth annual mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers will be held on Monday and Tuesday, June 5 and 6, at the Edgewater Beach Hotel, Chicago. The regular sessions will be preceded by a meeting of the Board of Governors in Chicago on Sunday evening, June 4 at 7:00 P. M. There will also be a program of entertainment, including a golf tournament and horseback riding, on June 4 prior to the meeting and a trip through the Century of Progress by bus on June 7, following the convention. Business sessions will be held morning and afternoon on June 5 and 6, with group luncheons on each. The mid-year banquet, which this time will be in the form of a beefsteak dinner with a more elaborate floor show than heretofore, will close the meeting on Tuesday evening, June 6. Preceding the dinner, there will be a reception in the Lincoln Room of the Edgewater Beach Hotel at 6:30 P. M.

The convention will be in charge of Walter J. Andree of Sinclair Refining Co., New York, chairman of the Convention Committee, assisted on arrangements by John Powell of John Powell & Co., Harry W. Cole of Baird & McGuire, Inc., and J. A. Walsh of C. B. Dolge Co. Entertainment and the banquet will be in charge of Grant A. Dorland of the MacNair-Dorland Co. General registration, covering a "round trip ticket" for luncheons and banquet will be reduced to ten dollars per person this year. Complete convention details, including trains, hotel rates, etc., are being sent out from the secretary's office.

The tentative program, subject to a few last minute revisions, follows:

Monday Forenoon, June 5th

9:00 A. M.—Registration, Lincoln Room, Edgewater Beach Hotel.

9:30 A. M.—Meeting called to order by President Peter Dougan of Merck & Co., Inc., Rahway, N. J.

Appointment of Resolutions Committee.

Report of President, Peter Dougan, of Merck & Co., Inc., Rahway, N. J.

Report of Treasurer, John Powell, of John Powell & Co., Inc., New York, N. Y.

Report of Secretary, H. W. Cole, Holbrook, Mass.

Report of Membership Committee, John Powell, John Powell & Co., Inc., New York, N. Y.

Report of Trade Ethics Committee, Dr. Robert C. White of Robert C. White Co., Philadelphia, Pa.

Proposed amendments to the Constitution and By-Laws.

Report of Program Committee, W. J. Andree, Sinclair Refining Company, New York City.

Report of Entertainment Committee, Grant A. Dorland of MacNair-Dorland Company, New York City.

Monday Afternoon, June 5th

2:15 P. M.—Report of the Committee on Disinfectants, S. H. Bell of Koppers Products Company, Pittsburgh, Pa.

Report of the Disinfectant Standardization Section, Dr. Wm. Dreyfus of West Disinfecting Company, Long Island City, N. Y.

"Selling Disinfectants to Public Institutions," by Walter L. Savell of The Mathieson Alkali Works, Inc., New York City.

Report of the Disinfectant Scientific Section, Dr. Emil Klarmann of Lehn & Fink, Inc., Bloomfield, N. J.

Report of the Disinfectant Nomenclature Committee, Dr. Geo. F. Reddish of Lambert Pharmacal Company, St. Louis, Mo.

"Need of Stabilization of Disinfectant Prices," by H. W. Hamilton of The White Tar Company, Kearny, N. J.

Proposed amendment to the Insecticide Act of 1910 to provide for the Bacteriological Testing of Disinfectants, Peter Dougan of Merck & Co., Inc., Rahway, N. J.

Report of the Committee on Liquid Soap, John V. Halaska of the Acme Chemical Co., Milwaukee, Wis.

Report of the Scientific & Standardization Section (liquid soap) by D. J. Bachrach of Clifton Chemical Co., New York City.

Tuesday Forenoon, June 6th

9:30 A. M.—"The Future of the Insecticide Vaporizing Machine." By A. A. Breuer of Breuer Electric Mfg. Co., Chicago, Ill.

"Use of Paradichlorobenzene as an Insecticide and Deodorant." By F. W. Wolff of E. I. Du Pont De Nemours & Company, Wilmington, Del.

Report of Insecticide Committee, Charles P. McCormick of McCormick & Co., Inc., Baltimore, Md.

Report of Insecticide Standardization Section, N. J. Gothard of Sinclair Refining Company, East Chicago, Ill.

Report of Insecticide Scientific Section, Dr. Charles H. Peet of Rohm & Haas Co., Philadelphia, Pa.

"How Pyrethrum Acts on Insects." By Dr. Alfred Weed, of John Powell & Co., Inc., New York City.

Tuesday Afternoon, June 6th

2:00 P. M.—"Is There Any Justification for the Growing Pyrethrum Concentrate Sales?" By Dr. Robert C. White, of Robert C. White Co., Philadelphia, Pa.

"The Farm Market for Insecticides, Disinfectants and Stock Spray." By W. H. Kircher of *The Farmer's Wife*, St. Paul, Minnesota.

"Glass Packaging." By H. A. Barnby of Owens-Illinois Glass Company, Toledo, Ohio.

"The Cattle Spray Market." By H. M. Clark, of Dr. Hess & Clark, Inc., Ashland, Ohio.

"The Radio in Modern Merchandising." By Emmons C. Carlson of the National Broadcasting Co.

"Use of Liquid Insecticides in Preventing Moth Damage." By Wallace Thomas of Gulf Refining Company, Pittsburgh Pa.

Tuesday Evening, June 6th

6:30 P. M.—Reception and Banquet in the Lincoln Room.

IN respect to entertainment during the meeting, Grant A. Dorland, chairman of the Entertainment Section of the Convention Committee, has issued the following notice:

BANQUET AND ENTERTAINMENT: This year tickets for the dinner will cost less than ever before—only $6.00 per person—in spite of the fact that plans are being made for an altogether different type and more elaborate entertainment than has ever been presented. The best of the country's talent is concentrating in Chicago on account of the World Fair and we have lined up plenty of the best acts. This time we will follow less the usual run of club shows, as before, and more toward specialty attractions of undoubted merit. The association treasurer is going to take it on the chin but who cares? A reception, scheduled for 6:30, will precede the dinner and show. It should not be missed for several reasons. The dinner itself will be a "beefsteak," with aprons and hats for everyone.

GOLF TOURNAMENT, SUNDAY, JUNE 4: A hotel bus or private cars will leave the Edgewater Beach Hotel at 1:30 sharp for the Bob-o-Link Golf Club, about forty-five minutes from the hotel. The entry fee, including greens fee, will be $3.00. Since the club professional will only be able to supply ten sets of clubs, for those who do not bring their own to Chicago, definite reservation should be made with the entertainment committee in advance. Leave your entry at the hotel desk sometime Saturday, marked for Grant A. Dorland, or mail it to him at 136 Liberty St., New York, beforehand. Prizes will be awarded at the annual dinner.

World's Fair Tour, Wednesday, June 7: For those interested in a group tour of the fair the committee has arranged for a hotel bus, to leave early Wednesday afternoon. The time and cost (moderate) will be announced at the meeting.

Horseback Riding Party, Saturday and Sunday, June 3 and 4: Those interested in riding, either Saturday afternoon, leaving the hotel at 2 P. M., or Sunday morning, leaving at 9 A. M., should advise the entertainment chairman at least one week in advance, specifying the type of horse desired. Arrangements can be made for excellent horses at an academy about a half-hour drive from the hotel.

—o—

The Entomological Society of London celebrated its first hundred years of existence on May 3rd of this year, and a reception to the Fellows of the Society was given by the British Government at Lancaster House, St. James.

—o—

Cube root has been declared a public utility by the Peruvian Government and its export forbidden in the form of seedings or fresh roots. Roots containing not more than ten per cent moisture may be exported provisionally under license pending the building of a rotenone extraction plant by the Peruvian Government.

—o—

McCormick & Co. awarded gold merit buttons to five employees recently, the individuals singled out for this distinction being Charles F. McCormick, vice-president, W. L. Bean, secretary, George M. Armor, vice-president, Norvell R. Walker, salesman, and W. A. Daugherty.

—o—

The naval stores department of Hercules Powder Co. is distributing a series of bulletins emphasizing the high content of active ingredients in "Yarmor" pine oil, and also stressing the emulsifying and dispersing properties of the Hercules product.

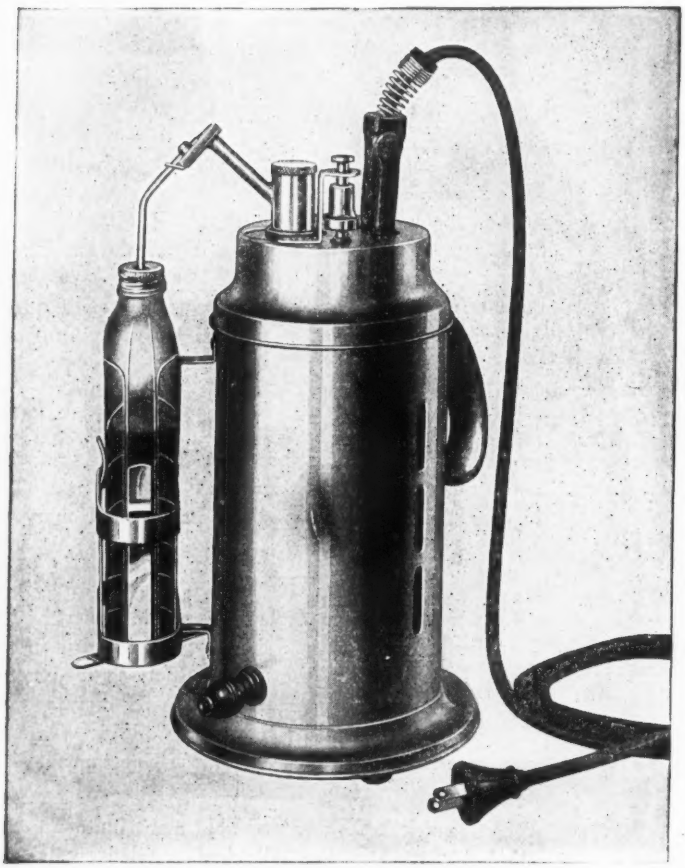
—o—

W. B. McCloud & Co., 325 West Huron Street, Chicago, is introducing a new rat exterminator under the name "McCloud's Sentinel Red Squill Liquid Rat Exterminator." It is being offered through the seed trade.

—o—

Langwell Chemical Works, 2211 N. 7th St., Milwaukee, is preparing to engage in the manufacture of a line of plant sprays, household insecticides and cleaners to be marketed through the jobbing trade.

THE MANNING-BOWMAN
ELECTRIC VAPORIZER



Much Larger Capacity At No Additional Cost

●The Manning-Bowman Vaporizer is a larger device for diffusing Pyrethrum Concentrate. It was developed and is guaranteed by a company whose manufacturing experience dates from 1864; and who have been, and still are, pioneers in the manufacture and development of electrical devices. This is your guarantee of the best.

●In many instances the spraying operation has to be repeated because of larger areas. This is not necessary with the Manning-Bowman Vaporizer because it has sufficient insecticide capacity to do the complete job. Use your own insecticide as we do not manufacture or sell one.

●Compare the Manning-Bowman Vaporizer with any other on the market. Write for complete information about prices and distributing contracts.

MANNING - BOWMAN & CO.
MERIDEN, CONN.

The Active Principles of Pyrethrum And Their Action on Insects

By FRANK WILCOXON and ALBERT HARTZELL

Boyce Thompson Institute

IN recent years, many publications have appeared dealing with the chemistry of pyrethrum and with various questions related to its use as an insecticide.[1] Nevertheless there are still certain important points which require investigation. Among these may be mentioned the mode of action on insects, the relative toxicity of pyrethrin I and II, and the need of a simple method for obtaining the pyrethrins in pure form for the purpose of studying their chemical properties and for standardizing biological tests on insects. The present paper presents a relatively simple method for obtaining small quantities of the pyrethrins freed from the impurities which accompany them in the flowers, together with a study of the penetration of the pyrethrins into the body of certain insects and their effect on nerve tissue.

Purification of the Active Principles

SEVERAL investigators (1, 7, 8) have described methods for obtaining the pyrethrins in substantially pure form. The methods used are, however, rather troublesome and indirect, since large samples are necessary, great volumes of solvents are required, and the pyrethrins are made to enter into chemical combination with semicarbazide from which they must be subsequently regenerated.

For these reasons an attempt was made to isolate the active principles by a purely physical method, not involving the use of semicarbazide, but depending on the differential solubility of the pyrethrins and accompanying impurities in low boiling petroleum ether and 80 per cent methyl alcohol.

Method of Purification. The sample of flowers, about 500 g., was extracted with low-boiling petroleum ether in a continuous extractor, and the solvent removed at low temperature under the water pump. The crude extract was dissolved in warm methyl alcohol and on cooling the solution for a few minutes, resins separated and were filtered off. The filtrate was treated with norite charcoal, which removed some of the pigments. The methyl alcohol was then removed under the water pump, yielding an oil which contained from 50 to 60 per cent of total pyrethrins. This oil was then submitted to a systematic fractionation between petroleum ether and 80 per cent methyl alcohol according to the scheme illustrated in Figure 1. Each circle in the diagram represents a separatory funnel containing petroleum ether and 80 per cent methyl alcohol. The original sample, after being shaken in funnel No. 1, separates into two layers, which are drawn off. The petroleum ether layer goes to funnel No. 2, where it is shaken with fresh 80 per cent methyl alcohol, while the methyl alcohol layer goes to funnel No. 3, where it is shaken with fresh petroleum ether, and this is continued as shown by the arrows in the diagram. It was found that the impurities tended to concentrate at the ends while the center fraction became richer in the pyrethrins. Since the solubility of the pyrethrins in petroleum ether is considerably greater than in 80 per cent methyl alcohol, about 50 cc. of the latter were used with 25 cc. of petroleum ether. The following experiment is typical of many performed:

A sample of flowers containing 0.98 per cent of pyrethrin I and II was extracted and submitted to the preliminary purification yielding a product which contained 23.4 per cent of I and 38.3 per cent of II, making a total of 61.7 per cent. This product was then treated according to the scheme outlined above, and various fractions analyzed. Fraction 16 A and B contained 25.2

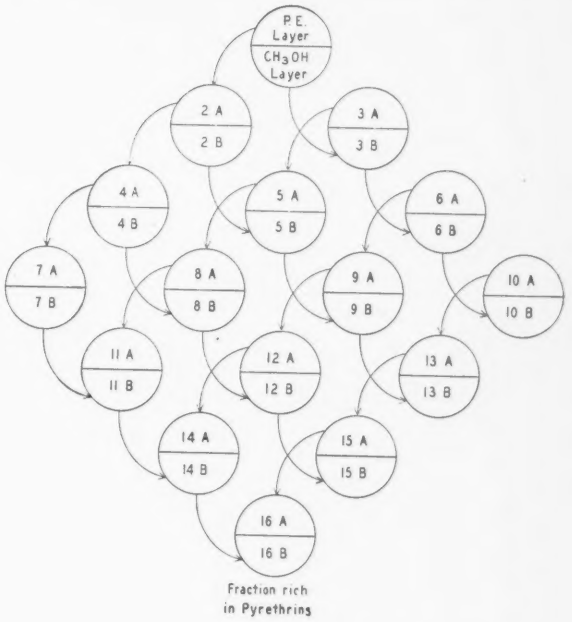


Figure 1. Scheme for purification of pyrethrins by use of immiscible solvents

[1] The complete experimental results on which this paper is based were published by the writers in Contrib. Boyce Thompson Inst., Vol. 5, No. 1, pp. 115-127, 1933, under the title: "Some factors affecting the efficiency of contact insecticides. III. Further chemical and toxicological studies of pyrethrum."

per cent I, and 61.9 per cent II, totaling 87.1 per cent. Analyses of some of the other fractions are shown below:

Fraction	Pyrethrin I	Pyrethrin II	Total
11A	36.9	35.5	72.4
14A	39.0	41.7	80.7
13B	14.3	47.2	61.5
15B	19.7	66.1	85.8

It may be seen that the pyrethrins tend to concentrate in the final center fractions at the bottom of the diagram. These fractions, 16 A and B, were then submitted to a further fractionation following the same system as before, yielding a final product which gave on analysis 33.0 per cent of I, and 68.1 per cent of II, totaling 101.1 per cent, which indicates substantially 100 per cent purity as far as can be determined by the acid titration method.

Another sample which was obtained by this method gave on analysis 44.75 per cent of I, and 55.3 per cent of II. A determination of carbon and hydrogen by microchemical combustion on this sample gave 73.43 per cent C, 8.95 per cent H, while the calculated values for this mixture are 73.4 per cent carbon and 8.49 per cent hydrogen.[2] From these results it appears that small amounts of mixtures of pyrethrin I and II may be obtained substantially free from other impurities.

Attempted Separation of Pyrethrin I and II

IT was observed in the course of this work that the petroleum ether layers were invariably relatively richer in pyrethrin I, while the methyl alcohol layers were richer in pyrethrin II. It was hoped that a separation of the pyrethrins could be effected by a further fractionation of a sample already freed from impurities. This was not entirely successful, chiefly because of the small amount of material available to begin with. A partial separation was, however, effected and fractions obtained which differed widely in ratio of I to II. With these fractions toxicity tests were performed in the manner described previously (2), in order to determine the relative toxicity of the two esters to the black bean aphis (*Aphis rumicis* L.). Authorities are not agreed on this question: Tattersfield and others (8) have stated that pyrethrin I is many times as toxic as pyrethrin II, while Gnadinger and Corl (1), working with pyrethrin oil sprays on houseflies concluded the "The difference in toxicity between pyrethrin I and II cannot be great." The question is one of some importance since different samples of flowers may vary considerably in the ratio of I to II, but if the total pyrethrin content were the same, those methods of analysis which determine only the sum of the two esters would indicate equal effectiveness. On the other hands if the toxicity of pyrethrin II were negligible compared to that of I, the samples might be evaluated on the basis of their content of pyrethrin I alone, thus shortening the time required for a determination.

[2] These microcombustions were performed in the Experimental Research Laboratories of the Burroughs Wellcome Company, Tuckahoe, New York, and the authors wish to express their indebtedness to Dr. C. S. Leonard and members of his staff for their kind cooperation.

TABLE I

Comparative Toxicity to Aphis *rumicis* of Pyrethrum Extracts, Varying in the Ratio of Pyrethrin I to II

Per cent pyrethrin	Per cent pyrethrin II	Per cent total pyrethrins	Per cent mortality	
23.1	28.5	51.6	55.5	
9.5	42.1	51.6	25.6	
21.6	24.4	46.0	62.5	53.0
8.3	41.6	49.9	32.0	26.0
43.6	57.1	100.7	22.8	23.5
14.7	76.5	91.2	9.5	10.3
50.6	44.4	95.0	51.1	49.4
2.8	92.6	95.4	17.0	9.1

Relative Toxicity of Pyrethrin I and II

IN the following experiments samples containing widely differing ratios of I to II were made up to the same total pyrethrin content in acetone. Portions of the acetone solutions were pipetted into water and toxicity tests performed as described previously (2), using *Aphis rumicis* on nasturtium (*Tropaeolum minus* L.). The samples were compared in pairs, both members of a given pair being run at the same time. Most of the toxicity tests were performed in duplicate. The results are shown in Table I. It is clear that under these conditions pyrethrin I is much more toxic than pyrethin II, in agreement with the results reported by Tattersfield.

Mode of Action of Pyrethrum and Its Effect on Insect Tissues

IN a previous publication the writers (9) have shown that aqueous spray solutions do not penetrate the tracheae of insects except when an efficient wetting agent such as soap is present. Such wetting agents markedly increase the effectiveness of nicotine sprays. In the case of pyrethrum sprays a wetting agent has also been found desirable. Nevertheless, with pyrethrum, killing can take place without actual penetration of the tracheae. This is shown by the fact that aqueous emulsions of pyrethrum are quite toxic even without a wetting agent, and also by the fact that concentrated pyrethrum preparations, when placed on portions of the insect far removed from the spiracles and body openings, were able to cause characteristic pyrethrum intoxication and death (2). In an attempt to explain this phenomenon, the possible penetration of the material through the integument was studied by means of dyes dissolved in the pyrethrum concentrate. By using oil red, Sudan III, and "oildag," a colloidal graphite, evidence was obtained that pyrethrum could penetrate the integument of insects at least in certain regions.

Yellow meal worm larvae (*Tenebrio molitor* L.) were painted on the dorsal surface with pyrethrum extract, obtained as described under "Method of Purification," colored with oil red or with Sudan III, care being taken that none of the material came in contact with the spiracles. After the insects were dead, their bodies were

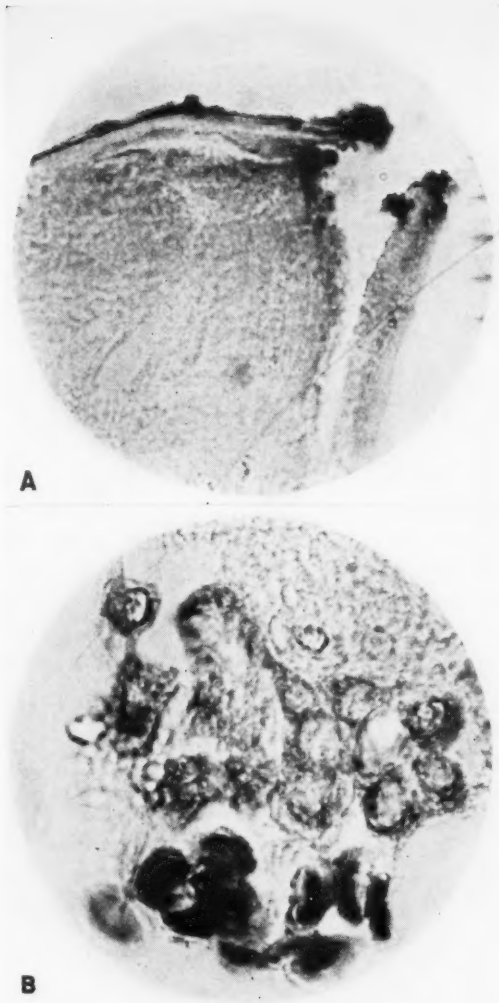


Figure 2. Effect of pyrethrum concentrate on nerve ganglia: (A) Cross section of a ventral nerve ganglion of a *Tenebrio molitor* larvae killed by decapitation and stained with toluidine blue. (B) Cross section of a ventral nerve ganglion of a *Tenebrio molitor* larvae that had been killed with pyrethrum extract and stained with toluidine blue. Note the vacuolated tissue with dark stained margins; the violet stained areas in the lower part of the photograph appear black

sectioned with a freezing microtome and examined immediately under the miscroscope for the presence of the dye. It was noted that the hair cells and hypodermal cells were stained red even in regions where no tracheae were present when Sudan III and oil red were used. These observations suggest that pyrethrum can gain entrance into the body by other means than penetration through the tracheae.

Although it has generally been considered that the pyrethrins are insoluble in water, experiments in which preparations of high purity were agitated with distilled water and subsequently carefully filtered, showed that the solubility while small is sufficient to produce a solution somewhat toxic to *Aphis rumicis* and to kill small tropical fish (*Lebistes reticulatus* Peters) It seems probable, therefore, that the pyrethrins would be soluble to a slight extent in the body fluids of insects and in this way be carried to the nerve ganglia where their toxic effects are manifested. We have, then, a plausible explanation for the fact that pyrethrum preparations, although of very low volatility and supposedly insoluble, can exert a toxic action when placed on portions of the integument far removed from the spiracles.

Juillet and others (3) consider that pyrethrum is a neuro-muscular poison and paralytic agent. Saling (6) has shown that the active principle of pyrethrum is a nerve poison as contrasted with a respiratory or blood poison. Krüger (5) has reported morphological changes in the hypodermis, muscles, and nerves of *Corethra* larvae that have been treated with suspensions of pyrethrum flowers in water. The ventral nerve ganglia of treated larvae, he states, showed vacuoles which were not present in the untreated larvae.

In order to study the effect of pyrethrum on the nervous system of insects in the present investigation, larvae of *Tenebrio molitor* were immersed in concentrated pyrethrum extract. After 16 hours they were removed, thoroughly rinsed in acetone solution and dissected under 95 per cent alcohol. Portions of the ventral nerve cord were removed, fixed in 95 per cent alcohol, and stained with toluidine blue according to a method attributed to Nissl by Krause (4, v. 3, p. 651). At the same time a series of larvae killed with concentrated nicotine sulphate and another series killed with lead arsenate were treated in a similar manner. The controls consisted of a series of larvae killed by decapitation and immediately dissected in 95 per cent alcohol, and of another lot of individuals which were decapitated and the cut ends sealed with paraffin (m. p. 56° C.) for 16 hours prior to dissection. This was done in order to determine whether a period of this length would produce any decomposition effects on the nervous system.

The material was fixed in 95 per cent alcohol for 16 hours, stained for five and one-half hours with 0.1 per cent aqueous toluidine blue, washed with 95 per cent alcohol, dehydrated with absolute alcohol, and imbedded in paraffin after running through xylol. Because of the fragility of the tissue it was found desirable to make gradual transitions by using combinations of xylol and alcohol, and paraffin and xylol. Sections of 5 m/u thickness were made.

Cross sections of the ventral ganglia and nerve cord stained blue throughout in all cases, except in the larvae that had been killed with pyrethrum extract. Scattered among the blue-staining cells, in this case, were areas in which the cells stained violet. In addition there were areas that appeared vacuolated, the margins of which were stained dark blue (Fig. 2, compare A and B). The contrast was so striking that one could distinguish without hesitation between the controls and the larvae treated with pyrethrum extract. Whether this stain is specific for the effects of pyrethrum was not determined although

(*Turn to Page* 99)

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Killing Power of Rodenticides

By E. F. SENNEWALD

Sennewald Drug Co., St. Louis

IN determining how much of this or that product will kill a rat, the answer lies in the weight of the rodent. The killing power of any drug, chemical, or preparation is always expressed as the amount necessary to kill a definite weight of rat and this is generally expressed in scientific papers as the number of milligrams of the substance necessary to kill a kiloweight of rats. Rats vary greatly in weight depending upon age, and other factors. Many wild rats will weigh less than eight ounces and few wild rats will weigh more than fourteen ounces. We generally figure that a rat will eat enough bait at one time to equal one per cent of its body weight. A rat weighing eight ounces will eat at least thirty-five grains or about one-twelfth ounce bait and a rat weighing fourteen ounces will eat about sixty grains or about one-seventh ounce of bait. The figures given in the charts herewith are all taken from various government publications except those figures for phosphorus. An explanation of the characteristics of some of the important rat killing preparations should also help to guide in their use.

Arsenic trioxide or ordinary white arsenic varies in killing power. The finer this chemical is ground the higher the killing power. The figures for arsenic given above may be high or low depending upon this factor. Baits such as ground meat used by exterminators generally contain ten per cent of arsenic or approximately one and one half ounces of arsenic to a pound of bait. Arsenic trioxide is odorless and practically tasteless. The statement has been made that rats object to its gritty particles and that a rat once poisoned but not killed by arsenic bait will not eat arsenic again. Ordinary white arsenic is a slow poison and kills in ten to thirty-six hours.

Barium carbonate is a white, odorless, tasteless powder. It is not soluble in water. It is acted upon by the acid in the rat's stomach and converted into a soluble form, namely barium chloride. All soluble salts or compounds of barium are poisonous. The killing power of barium carbonate is relatively low and it is best used with dry baits. Moist baits with barium carbonate generally develop an odor and taste which is objectionable to rats. Barium carbonate is a slow poison and rats generally die within sixteen to forty hours after eating it. Twenty per cent of barium carbonate in rat bait was found to be an efficient concentration.

Strychnine and strychnine sulphate are both white, odorless powders with a very bitter taste. They are not generally used as rat poisons as rats seem to object to the bitter taste of strychnine. Grains impregnated with strychnine and treated to cover the bitter taste are very satisfactory for exterminating mice. Strychnine is more toxic than thallium sulphate and is a very rapid poison. Due to the high, rapid killing power of strychnine, mice are generally found dead near the poisoned grains upon which they have been feeding. Mice like to feed in dark, quiet places and if the poisoned grains are placed in a box with holes in it so that the mice can enter to feed upon the grain they will probably very often be found dead in the box with the grain.

Red squill is a red brown powder that is non-poisonous to humans and domestic animals, but toxic to rats. This is due to the fact that rats cannot vomit like humans and most other animals. The killing power of red squill varies greatly. The figures in the chart are based on the suggested toxicity of red squill powder according to Tech-

1 kilo	= 1000 grams	= 2.2 pounds	
1 gram	= 1000 milligrams	= 15.43 grains	
1 milligram	=	1/640 grains	
7000 grains	= 1 pound	= 453.5 grams	
437.5 grains	= 1 ounce	= 28.35 grams	
1 grain	= 1/437 ounce	= .0648 milligrams	

MATERIAL	Milligrams Per Kilo of Rats	Grains of Poison Required to Kill an 8 Ounce Rat	Grains of Poison Required to Kill a 14 Ounce Rat	Grains of Bait Required to Kill an 8 Ounce Rat	Grains of Bait Required to Kill a 14 Ounce Rat
ARSENIC TRIOXIDE	100.	1/3 grain	3/5 grain	10% Arsenic Trioxide 3 1/2 grains of bait	10% Arsenic Trioxide 6 grains of bait
BARIUM CARBONATE	750.	2 5/8 grains	4 1/2 grains	20% Barium Carbonate 13 grains of bait	20% Barium Carbonate 22 grains of bait
STRYCHNINE	20.-25.	1/16 grain	1/8 grain	1% Strychnine 5 1/2 grains of bait	1% Strychnine 12 grains of bait
RED SQUILL	1000.	3 1/2 grains	6 grains	10% Red Squill 35 grains of bait	10% Red Squill 60 grains of bait
THALLIUM SULPHATE	31.	1/9 grain	3/16 grain	1% Thallium Sulphate 11 grains of bait	1% Thallium Sulphate 19 grains of bait
PHOSPHORUS	15.	1/18 grain	1/12 grain	2% Phosphorus Paste 2 7/9 grains	2% Phosphorus Paste 4 1/6 grains

1. High test red squill has a killing power of about 800 milligrams per kiloweight of rats.
2. A piece of bread about one half an inch square weighing about twenty grains will carry about five grains of Phosphorus Paste.

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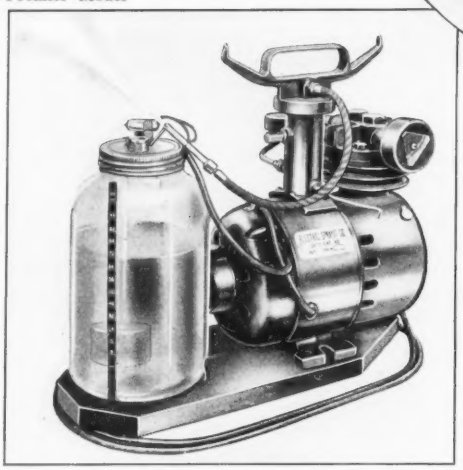
Furnished with 110-volt A.C. motor, 60 cycles; other windings available at extra cost.

Premier Model



The Premier Model Automatic Sprayit is designed for use in areas from 12,000 to 50,000 square feet of floor space. It is a sturdy unit, direct connected for operating quietness, compactness and easy portability. It is powered by a high grade ¼ H.P. repulsion induction motor. It is equipped with a one gallon glass material reservoir with float controlled mercury switch and can be set to operate continuously from one minute to one and a half hours without attention or stand-by service. A graduated scale mounted on the base makes it quick and easy to measure any amount of material to be atomized. Furnished with 110-volt A.C. motor 60-cycle; other windings available at extra cost.

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nical Bulletin No. 134, U. S. Department of Agriculture. Many commercial red squill powders have a higher killing power than 1000 milligrams per kilo but no baits containing less than ten per cent of red squill should be put out. High test red squill is a very satisfactory rat killer.

Thallium sulphate is a tasteless, odorless white powder. It is used in concentrations of one to two per cent as a rat and mouse poison. Thallium sulphate is less toxic than both phosphorus and strychnine. It is also more dangerous and more expensive than any other rodent killing preparation. Quoting Technical Bulletin No. 238, W. S. Dept. of Agriculture. "Where the use of thallium is found necessary for the control of highly resistant species of rodents, it should be entrusted only to persons who understand its dangerous qualities and who will exercise appropiate care in handling it." Quoting Bulletin No. 1533, Rat control, U. S. Dept. of Agriculture, "Without taste or smell to identify it, such as strychnine and phosphorus, thallium sulphate should be used only with utmost caution as it is most dangerous to human beings as well as to domestic animals."

Phosphorus is a yellowish, semi-transparent solid, luminous in the dark and inflammable on exposure to the air. It must be kept under water. Phosphorus is a very dangerous chemical and causes severe burns if improperly handled. Phosphorus is the most toxic chemical used to exterminate rats. It is much more toxic than either arsenic or strychnine and twice as toxic as thallium sulphate. It is generally used in the form of a paste containing two to three per cent phosphorus. There is no fire hazard connected with the use of a properly manufactured phosphorus paste. A paste containing two per cent phosphorus is twice as toxic as a paste containing two per cent thallium sulphate, and four times as toxic as grains carrying one per cent thallium sulphate. Phosphorus has a distinctive taste, odor and luminous properties by which it may be readily identified but to which rats apparently do not object. Phosphorus is a slow poison and kills in eighteen to thirty-six hours.

Tests on 20 Rats with 2% Phosphorus Paste. Each rat received the amount of Phosphorus necessary to kill according to the figures in Killing Power Chart.

RAT	WEIGHT	Amount of Phosphorus Paste	Hours Required to kill
No. 1	6 ounces	2. grains	18 hours
No. 2	8¼ ounces	2.2 grains	19 hours
No. 3	8¾ ounces	2.3 grains	19 hours
No. 4	10 ounces	3.1 grains	23 hours
No. 5	12½ ounces	3.8 grains	25 hours
No. 6	9 ounces	2.5 grains	20 hours
No. 7	6¾ ounces	2. grains	27 hours
No. 8	8¼ ounces	2.2 grains	22 hours
No. 9	9 ounces	2.5 grains	33 hours
No. 10	7 ounces	2.2 grains	20 hours
No. 11	10½ ounces	3.2 grains	30 hours
No. 12	10¾ ounces	3.3 grains	27 hours
No. 13	7½ ounces	2.3 grains	23 hours
No. 14	6½ ounces	2.0 grains	20 hours
No. 15	12¼ ounces	3.8 grains	36 hours
No. 16	11 ounces	3.4 grains	31 hours
No. 17	9¾ ounces	3. grains	19 hours
No. 18	12 ounces	3.7 grains	27 hours
No. 19	9½ ounces	2.9 grains	21 hours
No. 20	11¼ ounces	3.5 grains	20 hours

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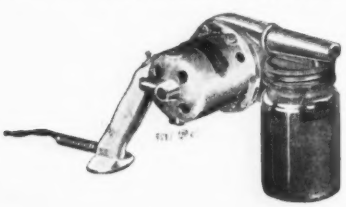

TORNADO Model 50 (at left) 1 pint glass jar.
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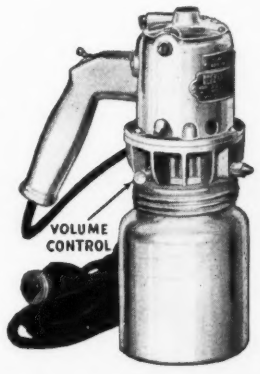
Both fan type units. Will spray 8 to 10 feet. ⅛ H.P. Universal motor. 20 feet of rubber cable.
TORNADO Model 53 (at right) Compressor type. 1 quart metal container with adjustable volume control. ⅛ H.P. Universal motor. 20 feet of rubber cable.



Baldwin Markets New Insecticide

Baldwin Laboratories, Saegerstown, Pennsylvania, are marketing this season a new household liquid insecticide under the trade name of *Dwin*. The product was inaugurated in December, 1932, and this is its first season. The company is under the direction of H. W. Baldwin, whose experience in the manufacture and marketing of insecticides and associated products dates back to 1910. The Baldwin Laboratories also manufacture other specialties, including ink remover, crow dope, cattle spray, and allied agricultural items. The household spray is perfumed with an unusual floral type bouquet and is otherwise odorless.

H. W. Baldwin

The company has recently purchased and occupied a modern, fireproof concrete building near Saegerstown, Pa., on the main line of the Erie Railroad, exactly halfway between New York and Chicago, and near Erie, Pa. The new plant, which is several times the size of the old building formerly occupied, contains 50,000 feet of floor space and has over 40,000 gallon storage capacity for the company's products, according to Mr. Baldwin. The firm was recently elected a member of the National Association of Insecticide and Disinfectant Manufacturers. Mr. Baldwin states that the sales force of the company, which formerly consisted of three men, has been increased to fourteen.

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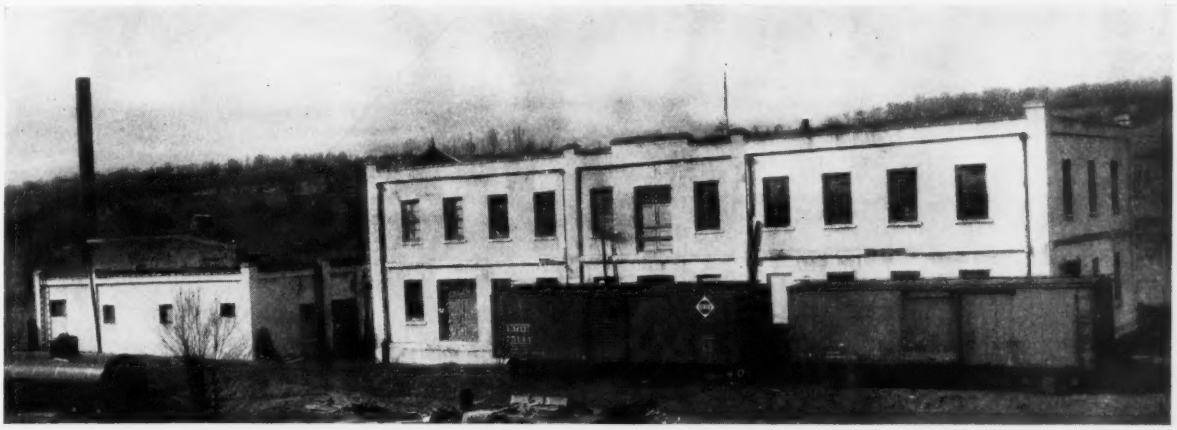
A mothproofing agent consists of arylsulfonic acid amides with the addition of esters of phosphoric acid. Thus the mixture may contain 3:4-dichlorobenzenesulfomethylamide and diethylbutylglycol phosphate. German Patent No. 558,509, filed Sept. 17, 1931.



New Plant of the Baldwin Laboratories at Saegertown, Pa.

Extracting Rotenone for Assay

Carbon tetrachloride is used as the extracting agent in assaying derris root and cube root for their rotenone content. Ether proved to be unsatisfactory for the purpose because it was difficult to induce crystallization of the rotenone from the solution and furthermore because ether extracts deposited amorphous material which interfered with filtration and gave erroneous results for rotenone. Details are given of the carbon tetrachloride method. Reasonably complete crystallization of rotenone from the evaporated carbon tetrachloride extract may be obtained by cooling the extract, seeding with a small crystal of the solvate compound, and allowing to stand in ice, with occasional stirring, for only two to three hours. The condition of the sample, the time of extraction, crystallization and filtration of the rotenone, purity of the separated rotenone, drying the non-crystalline extract, accuracy of the method and superiority of the method over ether extraction are discussed in detail. Carbon tetrachloride gives much more selective separation of the rotenone than is possible with ether.

Experiments were made in an effort to shorten the time of extraction by using solvents having a high solubility for rotenone, and the rotenone was then crystallized from the dried extract by means of carbon tetrachloride. Acetone was most suitable. The carbon tetrachloride method gives good results for the rotenone content of thoroughly airdried derris root, cube root and haiari stems. The method gives correct or slightly high results for roots containing over half a per cent of rotenone. For roots containing 0.3 per cent rotenone or less the method is without value unless larger samples are used. While acetone gives more rapid extraction of the rotenone, its complete separation from such extracts is difficult. Values based on the optical rotation of the extracts are incorrect. Howard A. Jones. *Industrial and Engineering Chemistry*, Analytical Edition, 1933, volume 5, pages 23 to 25.

—o—

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with 15 Gallons of CONCENTRATED NOX - KWIK for special DETHATOR VAPORIZER

DETHATOR VAPORIZER retails at $12.50

. . . the DETHATOR, the last word in asphyxiating insect pests. Larger capacity, quicker action, greater adjustment, cast aluminum en bloc nozzle and air chamber all in handsome feather-ex finish portable container with hand grip. Automatically shuts itself off when waterline is reached. Plugs into any wall socket and generates its own steam . . . powerful, safe, simple, and practical. Used with a SPECIAL FORMULA of CONCENTRATED NOX-KWIK FLY SPRAY, this latest development of the U. S. Sanitary Specialties Corp. forms the deadliest combination yet devised . . . it is not, however, harmful nor poisonous to human beings. *With every 15 gallon drum of CONCENTRATED NOX-KWIK FLY SPRAY (for a limited time only) we will furnish this U. S. DETHATOR FREE OF COST. Order as many deals as you need—but do it now. For hospitals, meat markets, candy factories, etc. Sells on demonstration. Highly concentrated, greatly exceeding the requirements* of the Peet-Grady test. Your price allows a handsome profit, yet retails for less than most concentrates selling at $8.00 a gallon. CONCENTRATED NOX-KWIK FLY SPRAY is extremely volatile and guaranteed stainless. When vaporized with the noiseless DETHATOR, it spreads rapidly, filling all nooks and crannies throughout the room. Just plug in, close the room and in seconds after the action begins, the battle is won. PLACE YOUR ORDER NOW.

15 gallon drum of CONCENTRATED NOX-KWIK INSECTICIDE SPRAY

BUILD BUSINESS UNDER YOUR PRIVATE LABEL

LUSTER BRYTE WAX — NO RUB water emulsion wax (liquid). Requires no buffing after application . . . dries glossy in 10 to 15 minutes . . . contains high percentage of Carnauba Wax . . . cuts labor costs to a minimum . . . neutral, no excess alkali. In 65, 35, 15, 10, 5 gal. drums and 1 gal. cans.

AERZONATOR BLOCS are extremely hard — hence longer life . . . contain 100% para, finest essential oils. Six popular sizes, 3½—1—8—16—25 or 40 ozs.

MOTHOBLOCS kill and repell moths and their larvae (send for special report of National Laboratories) . . . furnished in individual 4 oz. size hang-up, cardboard containers, or large sizes with metal wall containers.

NEUTRODOR URINAL BLOCETTES packed in lithographed metal tubes, either with or without our name . . . space left for dealer's name . . . muffin shaped, 4 oz. Cellophane wrapped . . . *not soluble* in moisture . . . packed 12 blocettes to a tube.

AEROZONE CRYSTALS are packed in easily used sifter-top lithographed cans . . . either with or without our name . . . supplied in Cedar, Pine, Rose, Lilac, Oriental Bouquet Fragrances . . . 1 pound net—24 to a case . . . processed so they will not solidify in can.

SOAP DEPT. liquid toilet soaps, mechanic's soap, scrubbing soaps, green oil soaps, shower bath soaps, automobile soap.

SOAP DISPENSER DEPT. soaperior soap, dispensers, all types for industrial or hospital installations.

DISINFECTANT DEPT. coal tar products (co-efficient 1 to 20), pine oil products, chlorine products, live stock dips, cresol compound U. S. P., or Technical, formaldehyde, odorless disinfectants, perfumed sprays.

POLISH DEPT. metal polishes, furniture polishes, automobile polishes, floor and dressing oils, waxes.

SPECIALTIES DEPT. indoor chemical toilets, sprayers (hand and power), drinking fountains, aerzonator air conditioners, vending machines and sanitary napkins.

MISCELLANEOUS formaldehyde fumigators, chemical pipe cleaner, deodorizing powders, sweeping compounds, toilet bowl cleaners, weed killers, gum removers, ratacides.

INSECTICIDE DEPT. liquid exterminators, powder exterminators, mosquitocides, gas-fumigating machines, vaporizers, concentrated insecticides.

U. S. SANITARY SPECIALTIES CORPORATION

433 - 441 So. Western Ave., Chicago, Illinois

Dr. Bocker on Warning Gases

In a recent address before the Society of Exterminators and Fumigators of New York, Dr. Edward Bocker, of the New York Department of Health, again brought up the subject of warning gases in connection with cyanide fumigations which he had discussed before. His remarks were considered significant in this regard, for he said:

"I should like to discuss an article on warning gases published in the March issue of *Soap*. In this article the word "Safe" in connection with cyanogen chloride was used. This statement was directed to the fumigator, particularly the fumigator who thinks that because he is using HCN in combination with a warning gas, he is safe in letting down the bars of caution. Examination of applicants for fumigator's license has disclosed that many fumigators are under the mistaken impression that the strict precautions required by Section 104 of the Sanitary Code may be relaxed because of some warning gas in combination. The section does not distinguish between any of the gases used in fumigation, the same precautions apply to all. The Department has not established a table of toxicity, it does not endorse or recommend any particular gas nor has it taken exception to the use of cyanogen chloride. It does, however, want to emphasize the fact that strictest precautions must be adhered to in any fumigation where a lethal gas is used. The sponsors of cyanogen chloride have called my attention to the fact that the use of this gas was discontinued for the reason that in its early stage of development it was inflammable. They inform me that this difficulty has now been overcome."

—o—

Kaz Manufacturing Co., Watertown, N. Y., manufacturers of "Insectors," electric-steam sprayers for insecticides, have established a New York City sales office in the Chrysler Building in charge of J. R. Katzman. The company recently completed mailing a four page folder to the trade, describing the two models available and featuring the automatic break-current. The latter makes it impossible for anyone to come in contact with live electrodes, according to the announcement. The large model, with a capacity of 32 ounces, has a suggested retail price of $12.50. The small Insector, with a suggested retail price of $6.50, has a capacity of 16 ounces.

—o—

John Powell & Co., New York, pyrethrum, have established a Los Angeles office at 143½ N. La Brea Ave., with Ben S. Cottle in charge.

—o—

P. C. Reilly, president of Reilly Tar & Chemical Co. and American Creosoting Co., has been elected a director of Real Silk Hosiery Co.

—o—

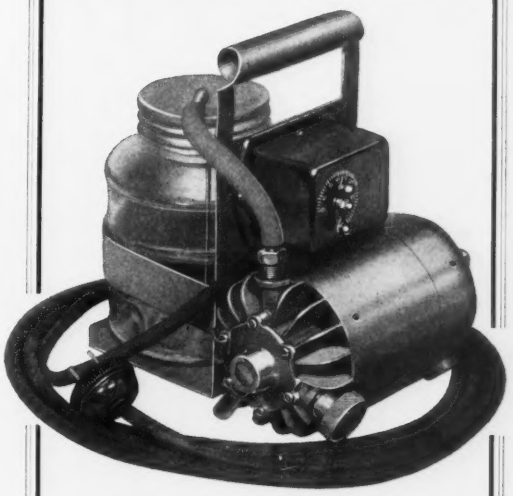
Rex Research, Inc., Toledo, manufacturers of *Fly-Tox*, are now being represented in Greater New York City and New Jersey by the J. R. Smith Sales Co., 19 Hudson St., New York. John Z. Heizer is in charge of sales for that company. W. H. Wales is no longer associated with *Fly-Fox*.

LOWELL

Announces

A NEW

ELECTRIC SPRAYER



No. 300

1. Heavy duty universal type motor for AC or DC current.
2. Develops 20# average head pressure.
3. Time switch permits stopping of motor at any desired period.
4. Motor consumes about one half as much current as steam outfit.
5. One quart glass container.
6. Safe and compact. An ideal outfit for exterminators.
7. Will handle any insecticide and is convenient, neat and easy to use.

FOR EFFICIENCY!

LOWELL MANUFACTURING CO.

LOWELL MEMBER NATIONAL ASSN. INSECTICIDE AND DISINFECTANT MFRS. INC. 1914 INC. MICHIGAN

FLY PEST SEASON IS HERE!

Increase Your Profits by Selling Fly Sprays. During the Spring and Summer Months There Is a Large Demand for Them.—Cash In On It.

Light Colored Cattle Spray

Sure and effective repellent against flies and mosquitoes. Does not stain skin or mat hair of live stock. Used widely as an economical spray.

Special Stock Spray

A higher grade cattle spray. An actual FLY KILLER—not merely a Fly Chaser. It exterminates quickly when sprayed in stalls and stables or when applied directly on the animals.

HOUSEHOLD FLY and INSECT SPRAY

A high class fly killer for household use. Pleasing and agreeable odor. Will not stain. Also excellent for moths, bed bugs, and roaches. Priced very low.

Others Make Big Money Handling these Products in a Large and Profitable Market. Why Not You? Write Us for Samples, Prices and Full Information.

THE CHEMICAL SUPPLY COMPANY

Disinfectants, Insecticides, Sanitary Specialties for the Wholesale and Jobbing Trade Since 1898

2450 CANAL ROAD **CLEVELAND, OHIO**

POWDERED AND GRANULATED
PYRETHRUM

Years of experience and long established buying contacts insure the high quality of McCormick's Pyrethrum. But more than high toxic content is required for the efficient use of Pyrethrum, it must be properly ground in order to extract the pyrethrins. A close examination of McCormick's Powdered Pyrethrum will clearly show uniformly fine particles due to the air flotation process; and of McCormick's Granulated Pyrethrum, that *all* the achenes are broken up, thus allowing maximum extraction to be obtained.

CONCENTRATED OIL EXTRACTS

having known killing power that is guaranteed, are manufactured by experts under the most rigidly controlled methods. The base for these extracts is a petroleum oil that has been refined to complete freedom from any kerosene odor.

● ROTENONE . . . . .

properly compounded with Pyrethrum will stay in solution and yield the greatest kill most economically. Investigate McCormick's combinations before purchasing Pyrethrum and Rotenone solutions to insure highest quality at lowest cost.

● STEAMOL . . . . . .

is a new non-poisonous insecticidal concentrate developed for proper dispersion by means of the steam atomizer. It has a high killing efficiency and will produce no obnoxious odors. Sold in bulk only.

STANDARDIZED LIQUID AND DUST PYRETHRUM INSECTICIDES

McCORMICK & CO., INC., BALTIMORE, MD.

Maintenance Supply Co., 114 East 32nd St., New York, has been appointed wholesale distributors for the new automatic electric insecticide vaporizer of Manning, Bowman & Co., Meriden, Conn., according to an announcement by J. S. Schaul, president of the Maintenance Supply Co.

—o—

Rett Disinfecting Co., manufacturers of insecticides, disinfectants, and other sanitary supplies, have moved to larger quarters at 191 Lembeck Ave., Jersey City, N. J. The old address was 236 Stegman St., Jersey City. William F. Rett is president.

—o—

The Vapo-Ball, a new electric machine for exterminating moths, is described in a folder issued recently by Kirkman Engineering Corp., 1 Dominick St., N. Y. The Vapo-Ball is a copper machine about 4 inches in diameter, weighing less than a pound and being equipped with an 8 foot electric cord. It can be plugged into any socket and moved about from closet to closet without difficulty.

—o—

Sanitary Utility Co., 236 W. 26th St., N. Y., is manufacturing and marketing three dispensing machines which should be of considerable interest to manufacturers and distributors of soaps and sanitary products, the first machine being sold as the "Sanicover Vendor," one toilet seat cover being available upon the insertion of one cent or it may be had to dispense covers without charge. The second machine dispenses a cake of soap about the size of hotel guest cakes and holds about 50 cakes. Another machine designed for use in factories, garages, etc., dispenses a can of mechanic's hand soap. These machines made of 16 gauge metal are being sold through the jobbing trade.

—o—

Gilbert Mosby, originator of "Konjola," has just put on the market a new antiseptic which will sell under the name, "A to Z." The new product is carbonated and can be sprayed into the mouth from its container. It is sold to retail at $1.00 a bottle, and will shortly be supported by an extensive advertising campaign.

—o—

Hild Floor Machine Co., Chicago, has started distribution of a floor maintenance chart giving operation and material schedules for proper servicing of various types of floors. All necessary supplies, equipment and the advised treatment for each surface are given.

—o—

R. M. Hollingshead Co., Camden, N. J., has named Browning & Hersey, Inc., to take charge of advertising of "Whiz" automotive products.

—o—

Jungmann & Co., N. Y., importers and manufacturers' sales agents for a number of chemical raw materials for manufacturers of soaps, insecticides, etc., have moved their office to 157 Chambers St.

Reilly
TAR & CHEMICAL CORPORATION

CRESYLIC ACID
CRESOL
CRESOL U. S. P.
XYLENOL
TAR ACID OILS
NAPHTHALENE
REFINED
(flake, ball and chipped)

. . . and other Coal Tar Chemicals for the

SOAP and DISINFECTANT INDUSTRY

REILLY
Tar & Chemical Corporation
Merchants Bank Bldg., Indianapolis
500 Fifth Ave., New York
2513 S. Damen Ave., Chicago

Wholesale Murder

That's what it is when
BENKERT'S PYRETHRUM PRODUCTS
get to work on the poor insects.

Pyrethrum Powder
Derris Powder
Pyrethrum Concentrate No. 15
Rotenone Combinations

W. BENKERT & COMPANY, INC.

Crude Drug Importers

100 Gold Street **New York**

Detroit Representative
MR. R. M. STEVENSON,
2457 Woodward Avenue,
Detroit, Michigan.

Chicago Representative
MR. EVEN M. TYSDAL,
325 West Huron Street,
Chicago, Illinois.

St. Louis Representative
MR. JOSEPH FAHEY,
Cotton Belt Building,
St. Louis, Missouri.

It's the most "kill" per dollar that counts!

"SERRID" PRODUCTS *of* DERRIS ROOT

A complete range of Derris products uniform as to qualities, standardized as to Rotenone content, and sold on this basis. Available in large quantities to manufacturers of insecticides.

For Fly Sprays
"SERRID" DOUBLE X

A combination Rotenone pyrethrum oil concentrate that will stay in solution,—a decided improvement in the field. Sold on a kill basis as high as 85%. With this base manufacturers may improve their product and lower their costs.

For Agricultural Sprays
"SERRID" SUPERSPRAY

A finished concentrated liquid plant spray sold in bulk for repackaging. Highly effective against mealy bug and red spider. Tested and proven by prominent entomologists.

DERRIS, Inc.
79 WALL STREET, NEW YORK

MEMBER NATIONAL INSECTICIDE AND DISINFECTANT MFRS. INC. INC. 1914

Powdered Root, standardized, is most effective in household powders. For protection of vegetable and fruit crops, powdered Derris Root is not only efficacious but leaves no poisonous residue.

A new display of DWIN products, including the new household fly spray and cattle sprays. Manufactured by Baldwin Laboratories, Saegerstown, Penna. Containers by Continental Can Co. Green is the predominating color.

Hankscraft Co., 121 N. Dickinson St., Madison, Wis., has announced a new electric steam vaporizer. The machine drives a cloud of vapor into the room through a 10 pound atomizing steam jet, spraying automatically for from 15 to 20 minutes. The machine is easily filled with either insecticide or water by unscrewing the porcelain hand wheel. The insecticide cup is made of polished cast aluminum and the steamer of special high strength glazed porcelain. It has a chrome plated yolk. It will plug into any 110 volt alternating circuit and starts in 3 to 4 minutes.

—o—

Tanglefoot Co., Grand Rapids, Mich., has appointed Stevens, Palmer & Stevens, Inc., Grand Rapids, to handle its advertising account.

—o—

Action of Pyrethrum on Insects

(*From Page 87*)

nicotine sulphate, a contact insecticide, and lead arsenate, a stomach poison, did not produce any visible differences from the controls.

In this investigation the attention was centered mainly on a study of the effect of pyrethrum on nerve tissue. As pointed out previously, Krüger (5) has observed morphological changes in the muscles and hypodermis of *Corethra* larvae. As the integument of this insect is considerably more delicate than that of the larvae of *Tenebrio molitor* it would be expected that lesions in the hypodermis would be more marked in the former than in the last named specie. While not wishing to minimize the importance of the effect of pyrethrum on insect muscles and other tissues, it would appear from our studies that the destruction of nerve tissue is a primary factor in bringing about paralysis and death.

MEMBER
NATIONAL ASSN. INSECTICIDE AND DISINFECTANT MFRS. INC. 1914

DEODORIZING BLOCKS AND MATERIALS

Regular or Private Brand for Deodorizing and Moth Prevention Compressed Balls or Blocks

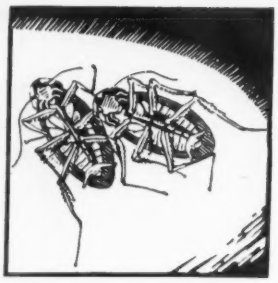
All Kinds of
NAPHTHALENE
Plain or Perfumed

PARADICHLOROBENZENE
Plain or Perfumed

Made with the most modern machinery

Send inquiries to
THE WHITE TAR COMPANY
BELLEVILLE PIKE - KEARNY • N.J.

KOPPERS



The Effective Insecticide

Quick — Positive — Safe

The average user of insecticides demands two things —quick action and certain death. Insect annoyance must be stopped promptly and permanently.

LETHANE 384

acts with surprising speed and with absolute certainty. It will pay you to use Lethane 384 as the active component of your insecticide.

Röhm & Haas Co., Inc.

222 West Washington Square

Philadelphia Pennsylvania

CIN-MADE CONTAINERS

Makers of all kinds of insecticides, cleansers, soap powders, deodorants, paradiclorbenzine blocks and crystals, and many other similar products use CIN-MADE cylindrical fibre containers. From a wide variety of styles, sizes and colors there is a CIN-MADE container to meet your individual requirement. A large stock of all standard sizes is always carried in stock enabling us to offer 24 hours' service on rush orders. Prompt service on special sizes.

A FEW CIN-MADE STARS

1. Single holders for para blocks. **2.** Special single holder with diamond cut holes and duo finish. **3.** Multi-type container for para blocks. **4.** Revolving nickeloid sifter cover. **5.** Aluminum pour-out spout type. **6.** Non-neck style—semi-perforated screw cap. **7.** Tin slip-on cover—semi-perforated. Samples and prices on request

THE CIN-MADE CORPORATION FORMERLY THE CINCINNATI MAILING DEVICE CO.
294 EGGLESTON AVENUE CINCINNATI, OHIO

Summary

1. A method is described for obtaining samples of the pyrethrins free from accompanying impurities, which is simpler than methods described previously, and which does not require the conversion of the pyrethrins into a derivative, and their subsequent regeneration.

2. In the course of this work samples have been obtained differing widely in the ratio of pyrethrin I to II. Toxicity tests using these samples on *Aphis rumicis* indicated that I is far more toxic than II.

3. The function of wetting agents in promoting the penetration of nicotine and pyrethrum into the tracheal system of insects has been discussed briefly. In the case of pyrethrum it has been found that intoxication and death may ensue from the external application of pyrethrum concentrates, under conditions where no tracheal penetration takes place.

4. Since the pyrethrins have low volatility, the possible penetration through the integument was studied by means of dyes soluble in the pyrethrins. Evidence is presented that the pyrethrins can penetrate the integument, at least in certain regions.

5. It has been shown that the pyrethrins have a low but appreciable solubility in water. These results suggest an explanation as to how the pyrethrum may reach the nerve ganglia when applied externally.

6. Histological changes were detected in nerve ganglia of insects killed by pyrethrum, by means of a staining technique using toluidine blue. These changes were not observed in insects killed by decapitation or by nicotine sulphate or lead arsenate.

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"Clean-Up with" VOGEL SPRAYERS

Vogel Sprayers give you the greatest returns in profits and satisfaction because they are staunchly constructed for long service at an economy price.

THE SPRAYERS are compact, durable and well worth a higher price. Regular hand and continuous types.

THE CANS, which are standard insecticide containers, come plain or lithographed in standard stock sizes for liquid contents, gross or carload lots.

Also **Deodorizing Block Holders —Shaker Top Cans For Para**

WILLIAM VOGEL & BROS., Inc.

37-47 South 9th St., Brooklyn, N. Y.

The New

BENETCO SWIVEL-SPOUT POR-PAIL

establishes new standards in pouring container efficiency. Tamper-proof, convenient, attractive and durable—it will quickly prove its power to speed up your sales. Illustrated folder gladly sent on request.

WILSON & BENNETT MFG. CO.

Southern Division
Cortez and Bienville Sts.
NEW ORLEANS, LA.

General Offices
6520 S. Menard Avenue
CHICAGO

Eastern Division
455 Third Street
JERSEY CITY, N. J.

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 136 Liberty St., New York.

Note: All advertisements must be in publisher's hands by the first of the month for that month's issue.

Positions Wanted

Soapmaker with 36 years' experience in Europe and America. Can make the following articles: Down boiled, semi-boiled and cold process soaps; Textile, soap powder, scouring bar and powder; and many other soaps from the kettle to the frame in the most economical way. Address Box 200, care *Soap*.

Soapmaker and Chemist—with long years' experience and excellent past record as expert in the manufacture of all kinds of soap, desires new connection with progressive concern. Address Box 206, care *Soap*.

Advertiser wants to connect with soap manufacturer or allied business for development of line of specialties for textile, leather, metal and cosmetic trades. Thorough knowledge and experience, manufacturing, selling, and customers' requirements. Address Box 204, care *Soap*.

Superintendent—Can make and analyze all kinds of soap and soap materials. Address Box 202, care *Soap*.

A master soap maker, 52 years experience all kinds of potash and soda soaps, also face and shaving creams, toilet and shampoo soaps, will send formulas with detail instructions and short cuts easy and practical at a reasonable price. References supplied. Address Box 209, care *Soap*.

Chemical Engineer, Soapmaker and Factory Superintendent;—boiled and cold made soaps; three years in Spanish speaking country. Address Box 203, care *Soap*.

Are You Interested in getting a good live salesman? Twenty years with my last employer. What line have you for me to sell? Write or wire—R. L. Regester, 6823 Thomas Boulevard, Pittsburgh, Pa.

IF you have a packaging problem that demands immediate attention, your telephone will put you in instant touch with your local Sefton sales representative, whose name is listed in the yellow pages of your telephone directory. Sefton Fibre Cans are available in a variety of styles, shapes and sizes and are made to fit individual specifications.

Write or wire
SEFTON NATIONAL FIBRE CAN CO.
3207 Big Bend Road, Maplewood, Saint Louis, Missouri

SEFTON CANS

CLEANING POWDERS

Supply the kind your trade wants . . . insure repeat orders

Let us make up your CLEANING POWDERS using your own names and labels.

Build up the business on *your own brand.*

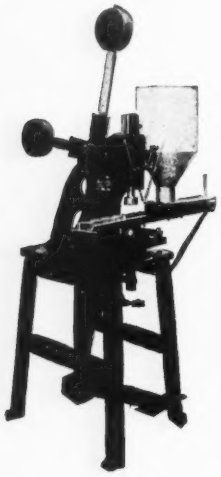
Special formulas developed.

Write for further details

KEMIKO MFG. CO.

187 Murray St. Newark, N. J.

HOUCHIN



Machine-Made
DEODORIZING BLOCKS
Sell Best!

Blocks made with this press, by the new cold pressed method, sell better and cost much less to make. Save 5% of your raw material, cut labor, and make a smooth, even, deodorizing block that will please your customers much more than the old style, irregular blocks. Complete cost details and manufacturing suggestions on request.

Let us make some sample cakes with your own material.

HOUCHIN MACHINERY COMPANY
HAWTHORNE NEW JERSEY

SOAP MACHINERY

PHOSPHORUS PASTE

Insecticide
and
Rodent Killer

Phosphorus is the most toxic chemical used to exterminate rats. It is more toxic than arsenic, barium, strychnine or thallium sulphate.

Phosphorus Paste is also an effective exterminator of water bugs and roaches.

There is no fire hazard connected with the use of our Phosphorus Paste.

It is a standardized product that is exceptionally smooth and consistently uniform.

Sold in fifty pound pails and unconditionally guaranteed.

POISON GRAINS

Effective and economical exterminators of mice.

Poison Rye (colored green)
Poison Oats (colored blue)
Poison Wheat (colored red)
Poison Barley (colored purple)
Poison Canary (natural color)
Mixed Poison Grains (colored four seed mixture)

Packed in fifty and one hundred pound drums.

We manufacture bulk products for the trade *only*.

SENNEWALD DRUG COMPANY, Inc.
800 Hickory Street Saint Louis, Missouri
Established 1855

Know What You Are Buying

As a buyer or consumer of liquid insecticides you must have some medium for ascertaining the efficiency of the products you purchase and sell.

Why guess or be in doubt? You have at your disposal a medium for purchasing insecticides on an intelligent basis.

Entomological testing by the Peet-Grady method, and chemical examination of insecticides are now available.

Charges are moderate, and our completely equipped and expertly directed laboratory is at your service.

ENTOMOLOGICAL TESTING LABORATORIES, INC.
114 E. 32nd St. New York, N. Y.

Grinds Everything Grindable

Insect Flowers

The "JAY BEE" hammer mill is designed to grind Pyrethrum Flowers for the greatest yield of Pyrethrins. Economy of grinding and uniformity of grind are not equaled by any other reducing process.

SOAP FLAKES! The "JAY BEE" makes a fine, uniform powder, grinding without heat or friction.

GRINDS Roots—Herbs — Barks — Seeds — Leaves — Spices — Nuts — Chemicals — of all kinds—Tobacco leaves and stems! The "JAY BEE" grinds everything fine, fast, cool, uniform at a lower cost per ton than any other grinder made.

Sturdy steel construction, built to last a lifetime. "JAY BEE" mills are complete and compact. Require small space. Sizes and styles to meet every grinding requirement: 2 H. P. to 100 H. P. with belt, V-belt and direct-connected drives.

Write for descriptive literature. Submit your grinding problems. Send us samples of any material you want ground.

"JAY BEE"

The World's Greatest Grinder

Manufactured by The Bossert Corp., Utica, N. Y. The World's Largest Builders of Hammer Mills

Used by the largest plants in the industry.

J. B. SEDBERRY, Inc., 140 Hickory St., Utica, N.Y.

Plant Manager—Chemist, age 36, fifteen years' practical experience in textile, laundry, toilet soaps; glycerine recovery. Address Box 192, care *Soap.*

Positions Open

Wanted:—Face cream expert. Must be experienced, practical man who has specialized in manufacture of high quality face creams, lotions, and beauty treatment lines. Please give full details and state salary in your reply, which will be held strictly confidential. Address: Secretary, Lambert & Feasley, Inc., 400 Madison Ave., New York, N. Y.

Distributors—Janitor supply houses and other distributors wanted to carry line of insecticides, moth products, liquid deodorants, and full equipment for sale to buildings, institutions, etc., and to retail stores. Address Box 208, care *Soap.*

Salesman—To handle line of liquid deodorizing specialties and equipment for building and household use, now stocked by leading New York stores. Also line of moth products. Communicate with Box 207, care *Soap.*

Distributors Wanted—Low priced mops for the janitor supply trade in middle and western states. Address Southern Chemical Co., Greensboro, N. C.

Representation Wanted: Old established manufacturer of quality soaps and polishes, wants sales representatives in important cities to supplement present mail order business by direct contact. Excellent opportunity for experienced salesmen, commission basis, or energetic distributing organization with few related lines. Give full experience and present lines carried. Address Box 201, care *Soap.*

Miscellaneous

Attention Soap Manufacturers:—Do you want distribution of your product in New York State? Our salesmen are now calling on the following trades: merchandising jobber, department and chain stores, wholesale and retail trade for leading soap manufacturers. Address Box 190, care *Soap.*

Joseph E. Johnson, president of Ohio Pail Co., Middlefield, Ohio, died at the age of 66, following a recent emergency operation while on his way home from Florida.

—o—

Farbo Paint Co., Baltimore, maker of "Farbo Cello Wax," is offering this product on the west coast, in combination with a lambs wool applicator, at $1.19 per pint.

High Grade Specialty Products

For the Wholesale Trade

*GOLDEN ROD SOAP CHIPS

Specially prepared for wholesalers for heavy duty cleaning. Contains eighty-eight per cent anhydrous soap. Packed in kegs, small and large barrels.

*NEOSOL POWDER

U. S. Reg. Trade Mark

An eighty-eight per cent (88%) soap for discriminating wholesalers, especially adapted for heavy duty work, and lends itself readily for compounding. Neosol is not an ordinary soap and washing powder, but a specially prepared detergent of high anhydrous soap content.

**These are the marks of our manufacture. They assure you of uniformity and excellence.*

MILWAUKEE CHEMICAL CO., INC.

204 N. Broadway St. Milwaukee, Wis.

Manufacturers of chemical products for the wholesale trade

REMOVAL SALE

Soap Machinery Specials

1—5 Roller Steel Mill.
1—8″ H.A. Plodder.
1—Ralston Power Soap Press.
4—Watercooled three Roller Mills.
Sargent Soap Chip Dryer.
12—1200 lb. Frames.
1—Colton Tube Filler.
2—Foot Para Block and Soap Presses.
1—Houchin Amalgamator.
3—Dopp and Houchin Vertical Crutchers.
1—1500 lb. Horizontal Crutcher.
3—Granite Stone Mills, 3 and 4 rolls.
1—Simplex Soap Powder Grinder.

Cutting Tables, Slabbers, Kettles, Pumps, Tanks, Filter Presses, Wrapping Machines, Tube Fillers, Closers, Crimpers, Dry Powder Mixers, etc.

Send for Complete List (Bulletin No. 10)

We buy and sell from single items to complete plants.

Stein-Brill Corporation

183 Varick Street New York, N. Y.

Phone: WAlker 5—6892-3-4

Cable Address: "BRISTEN"

found money

If *you* are not using Vioflor you are throwing away 40% to 70% of your cost for perfuming insecticides, naphthas, polishes, inks, para-blocks, etc . . . .

Without changing the odor effect now in your product!

It takes but a few minutes to demonstrate this.

Allow us to submit samples and further details.

Manufactured by **CREPIN & DOUMIN, Ltd., London, England**

Sold in the United States and Canada by

JOHN POWELL & CO., Inc.
114 East 32nd Street :: :: New York, N. Y.

ERTEL AMERICAN MADE
LIQUID HANDLING EQUIPMENT
ASBESTOS DISK FILTERS for SYRUPS, WATER, CIDER, ETC...
NEUTRAL ASBESTOS FILTER SHEETS
ALLEGHANY STAINLESS STEEL TANKS
GLASS LINED TANKS, PORTABLE MIXERS
PORTABLE BOTTLE FILLERS, PUMPS ETC.
ERTEL Engineering Corp.-108 East 16TH St..New York

ERTEL ASBESTOS DISC FILTERS

Especially suitable for filtering insecticides, light liquid soaps, polishes, toilet preparations, moth sprays, etc. Tell us what your problem is and let us work on it without obligation.

Note the handy grip, an exclusive feature of the Ertel Mixer, which makes it truly portable.

Made in all sizes to meet your mixing requirements.

KLEENWELL
SELF POLISHING WAX

The sensational, new liquid wax that dries hard and bright in fifteen minutes without polishing. Now available to the jobbing trade under your private label or under our own label. Kleenwell liquid gloss wax may be sold to your customers on a money-back guarantee—we stand back of the guarantee.

APPROVAL

Has been given Kleenwell Liquid Gloss Wax by leading linoleum, rubber and composition floor manufacturers.

Our direct national advertising campaign will obtain many leads for you. These leads will be given to our authorized jobbers. Your name on the margin of this ad will bring you a free sample together with the details of our proposition.

CHICAGO SANITARY PRODUCTS CO.
2526 W. Congress St., CHICAGO, ILL.

YOUR OWN BRAND
Toilet Soaps at Small Cost

For Details Address

GEO. A. SCHMIDT CO.
Manufacturers of SOAPS *of Every Description*
236-238 West North Avenue
Chicago.

A concern in Buenos Aires, Argentina, is interested in purchase or agency for medicinal soaps of American manufacture. Interested companies may communicate through the foreign trade opportunities department of the U. S. Bureau of Foreign and Domestic Commerce, mentioning No. *3627.

—o—

Stein-Brill Corp., New York, machinery and equipment dealers, moved May 1, to 183 Varick Street, where offices and warehouse are now consolidated. The concern leased 20,000 square feet of space at the new location, and will also continue to hold its Jersey City quarters until transfer of all stock is effected. George G. Rodgers Co., an associate of Stein-Brill Corp., manufacturing filling and mixing machinery, will also be located at 183 Varick St.

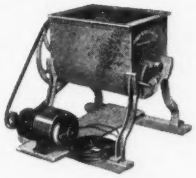
—o—

The various properties of "Halowax" are discussed in a folder recently issued by the Bakelite Corp., N. Y. Among other things, this product is suggested as an ingredient in many types of liquid, paste and emulsified polishes because of its high melting point, its moisture, acid and alkaline resistance. "Halowax" is also being used as a coating for wood, metal and other surfaces to protect against corrosion.

—o—

The April number of the report and price list of Merck & Co., Rahway, N. J., features the Merck exhibit at the Chicago World Fair.

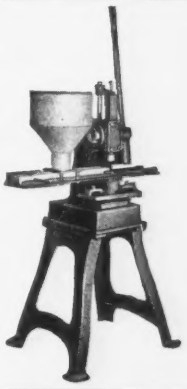
for* low cost *in* para block *manufacture



These two practical machines are all you need to produce high quality para blocks or cakes. The small machine on the left will thoroughly mix all ingredients. The large machine on the right will compress the mixture into any shape dies can give.

In addition, the mixer can be used on other dry products such as roach powder, cleansers, bath salts, etc. It will also give a smooth, soft and velvety texture to creams.

The hand lever press has more power than cheap foot presses. Inexperienced operators can rapidly turn out fine looking blocks. Send us some of your material and let us show you some specimen cakes. The press will save from 5% to 10% over the hot process.



HUBER MACHINE CO. 259 46th St., Brooklyn, N. Y.

Makers of Good Soap Machinery for Forty Years

TRISODIUM PHOSPHATE
DISODIUM PHOSPHATE

Preferred for their colorless crystals, uniform size and sparkling appearance. Prompt deliveries made from convenient distributing points. Packed in 325-pound paper-lined barrels and paper-lined kegs. Also in bags.

BOWKER
CHEMICAL COMPANY
419 Fourth Ave., New York

We Manufacture
For The Trade ONLY

Liquid Soap Base
Auto Soaps
Potash Oil Soap
Shampoo
U.S.P. Cresol Compound
Coal Tar Disinfectants
Liquid Soap
Pine Oil Soap
U.S.P. Green Soap
Shampoo Base
Pine Oil Disinfectants
Insecticides

Ask for samples of these specialty bulk products

HARLEY SOAP CO.
2852 E. Pacific St. Philadelphia

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

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ALKALIES

American Cyanamid & Chemical Corp.
Columbia Alkali Co.
Hooker Electrochemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Stauffer Chemical Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

Dodge & Olcott Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Maybee & Reynard, Inc.
Monsanto Chemical Works
Naugatuck Chemical Co.
Newport Chemical Works
Sherka Chemical Co.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

BULK AND PRIVATE BRAND PRODUCTS

Baird & McGuire, Inc.
Chemical Supply Co.
Chicago Sanitary Products Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Fuld Bros.
Harley Soap Co.
J. L. Hopkins & Co.
Hull Co.
Kemiko Mfg. Co.
Koppers Products Co.
Kranich Soap Co.
Milwaukee Chemical Co.
National Oil Products Co.
Palmer Co.
Papermakers Chemical Corp.
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Sennewald Drug Co.
Silmo Chemical Co.
Solshine Mfg. Co.
Stevens Soap Corp.
U. S. Sanitary Specialties Corp.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American Cyanamid & Chemical Corp.
Bowker Chemical Co.
Columbia Alkali Co.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Mechling Bros. Chemical Co.
Monsanto Chemical Works
Newport Chemical Works
Niagara Alkali Co.
Philadelphia Quartz Co.
Solvay Sales Corp.
Standard Silicate Co.
Stauffer Chemical Co.
Swann Chemical Co.
Joseph Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid oil, etc.)

American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Koppers Products Co.
Monsanto Chemical Works
Reilly Chemical Co.
White Tar Co.

CONTAINERS

Cin-Made Corp. (Fibre Cans)
Cleveland Container Co. (Fibre Cans)
Continental Can Co. (Tin Cans)
Maryland Glass Corp. (Bottles)
Metal Package Corp. (Tin Cans)
Owens-Illinois Glass Co. (Bottles)
Sefton National Fibre Can Co. (Fibre Cans)
William Vogel & Bros. (Tin Cans)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Oneida Chemical Co.
Palmer Co.
U. S. Sanitary Specialties Corp.
William Vogel & Bro.

ESSENTIAL OILS

Dodge & Olcott Co.
P. R. Dreyer, Inc.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Maybee & Reynard, Inc.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

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Consulting Chemists and Engineers

Specializing in Soaps, Disinfectants, Insecticides, Polishes, Etc.

FOSTER D. SNELL, INC.

Chemists-Engineers

A technical organization offering complete consulting, research, operating and management service.

130 Clinton Street **Brooklyn, New York**

Pease Laboratories, Inc.

39 West 38th Street New York

Chemical, Bacteriological and Sanitary Investigations

Soaps, Sanitary Specialties, Drugs, Cosmetics
Disinfectant and Antiseptic Testing Formula Development

FRANK R. GUNN

COMPANY

Analytical and Consulting Chemists

Ontario and Brabant Sts. Philadelphia, Pa.

Skinner & Sherman, Inc.

246 Stuart Street, Boston, Mass.

Bacteriologists and Chemists

Disinfectants tested for germicidal value or phenol coefficient by any of the recognized methods.

Research—Analyses—Tests

LLOYD A. HALL

Research and Consulting Chemist

Specialist in the analysis, development and improvement of soaps, disinfectants, insecticides, cleansers, polishes and allied products since 1915.

Complete Research and Consulting Services.

LABORATORIES

1415 W. 37th ST. CHICAGO, ILL.

Los Angeles Associate, Roger W. Truesdail, Ph. D.

F. & S.

Quality Colors

for

TOILET SOAPS
LIQUID SOAPS

TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.

205 FULTON STREET
NEW YORK, N. Y.

Import—Manufacture—Export

REPELOCIDE

for 1933 sprays

is really — CLICKING!

You cannot afford to wait or doubt

your* NEW DEAL *for

Livestock and Household Sprays must be outstanding.
Make it so by using

REPELOCIDE

the Combined Repellent and Toxic Activator

Let us send you full detailed information.
Trial gallon $2.50 F.O.B. St. Louis.

THOROCIDE COMPANY

619 Clark Avenue **St. Louis, Mo.**

They All Use Hull Emulsifier

Well—Nearly All

Hull Emulsifier renders more automobile cleaner-polishes stable than does any other protective agent. It is non-poisonous, non-corrosive.

Ask for Sample and Details.

The Hull Company

305 Washington St. Brooklyn, N. Y.

MAILING LISTS

Pave the way to more sales with actual names and addresses of Live prospects.

Get them from the original compilers of basic list information—up to date—accurate—guaranteed.

Tell us about your business. We'll help you find the prospects. No obligation for consultation service.

60 page Reference Book and Mailing LIST CATALOG

Gives counts and prices on 8,000 lines of business. Shows you how to get special lists by territories and line of business. Auto lists of all kinds.
Shows you how to use the mails to sell your products and services. Write today.

R. L. POLK & CO.
Polk Bldg.—Detroit, Mich.
Branches in Principal Cities
World's Largest City Directory Publishers

Mailing List Compilers. Business Statistics. Producers of Direct Mail Advertising.

RAW MATERIAL and EQUIPMENT GUIDE

(*Continued from page* 108)

NOTE: This is a classified list of the companies which advertise regularly in *Soap*. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, etc., in which you are particularly interested. Refer to the Index to Advertisements, on the following pages, for page numbers. *"Say you saw it in SOAP."*

MACHINERY

Alsop Engineering Co. (Liquid mixing, filling and storage)
Carnegie Steel Co. (Stainless Steel)
Ertel Engineering Co. (Liquid Handling)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
Illinois Steel Co. (Stainless Steel)
Proctor & Schwartz (Dryers)
J. B. Sedberry Co. (Grinders)
Stokes & Smith Co. (Packaging Machinery)

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein-Brill Co.

METAL CAPS

Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferdinand Gutmann & Co.

MISCELLANEOUS MATERIALS

Derris Inc. (Derris Products)
General Naval Stores Co. (Pine Oil-Rosin)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol, Carbon, Chalk)
Pylam Products Co. (Lathering Agent)
Rohm & Haas Co. (Insecticide Base)
Sennewald Drug Co. (Poison Baits)
L. Sonneborn Sons (Petroleum Products)
Thoricide Co. (Insecticide Base)

OILS AND FATS

Industrial Chemical Sales Co.
Leghorn Trading Co.
Newman Tallow & Soap Machinery Co.
Theobald Annual By-Products Refinery
Welch, Holme & Clark Co.

PARADICHLORBENZENE

E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Works
Niagara Alkali Co.
Solvay Sales Corp.

PERFUMING COMPOUNDS

Dodge & Olcott Co.
P. R. Dreyer, Inc.
Felton Chemical Corp.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Maybee & Reynard, Inc.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

(*Continued on page* 112)

Here is your wish!

HIGHEST QUALITY METAL POLISH,

Paste and Liquid, *at lowest price!*

1 to 55 Gallons *Write for Samples and Prices*

SOLSHINE MFG. COMPANY

Established 1897

17 CALDWELL STREET BOSTON, MASS.

"Our Success Is Due to the Quality of Our Products"

"FILMA-SEAL"

(the double seal of cap and film)

Is used on many nationally known products

Prevents

Evaporation—Leakage—Tampering

Send us a few of your packages, glass or tin, to "FILMA-SEAL" and we will prove its advantages to you.

FERDINAND GUTMANN & CO.

Bush Terminal No. 19 Brooklyn, N. Y.

Trade Marks Reg. Pats. Pending

SOAP POWDER

FLUFFY AND HEAVY

Scouring Powder

and

Detergent

Packed in barrels or kegs.
In bulk to the trade.

STEVENS SOAP CORP.

200 Sullivan St., Brooklyn, N. Y.

CUmberland 6—3747

FLOOR WAX

LIQUID PASTE POWDER

New Improved Self-Polishing Liquid Wax

UNDER YOUR OWN LABEL

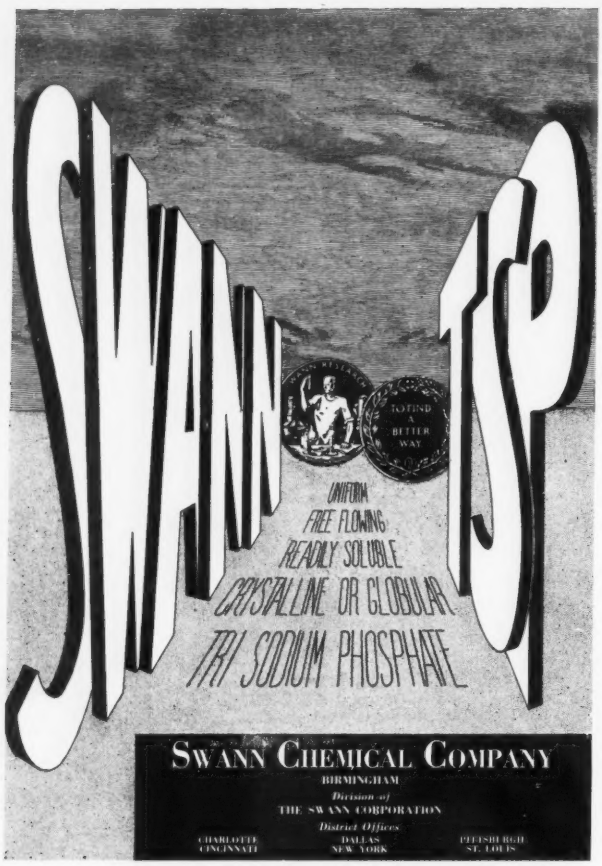
We print the label

Send for Samples and Quotations

WINDSOR WAX COMPANY

50 Church Street *REctor 2—0661* New York, N. Y.

Factory: 611-617 Newark St., Hoboken, N. J.



CARTER
Cleveland
POINTS WITH PRIDE...
TO ITS New
CARTER Hotel...
and you'll look back with pride and satisfaction on a visit to this great hotel where every room is as smart and new as a new day — where comfort and luxury achieve a new meaning — and where both rooms and food are priced surprisingly low
IN THE CENTER OF DOWNTOWN CLEVELAND
600 ROOMS FROM $2.50 EACH WITH BATH
FOLSOM B. TAYLOR Managing Director

RAW MATERIAL and EQUIPMENT GUIDE

(*Continued from page* 110)

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PYRETHRUM PRODUCTS

(Insect Flowers, Powder and Pyr. Ext.)

W. Benkert & Co.
J. L. Hopkins & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.

SOAP COLORS

Eaton-Clark Co.
Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.

SOAP DISPENSERS

Auto-Sun Products Co.
Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Co.
U. S. Sanitary Specialties Co.

SODIUM SILICATE

American Cyanamid & Chemicals Corp.
General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SPRAYERS

Breuer Electric Mfg. Co.
Du La Mfg. Co.
Hudson Mfg. Co.
Kaz Mfg. Co.
Lowell Sprayer Co.
Manning-Bawman & Co.
Sprayit Products, Inc.
U. S. Sanitary Specialties Corp.
William Vogel & Bros.

STEEL CONTAINERS

John Trageser Steam Copper Works (Pails and Drums)
Wilson & Bennett Mfg. Co. (Pails and Drums)

SULFONATED OILS

National Oil Products Co.
Richards Chemical Works

TRI SODIUM PHOSPHATE

American Cyanamid & Chemicals Corp.
Bowker Chemical Co.
General Chemical Co.
Grasselli Chemical Co.
Swann Chemical Co.
Victor Chemical Works
Warner Chemical Co.

for your paste products

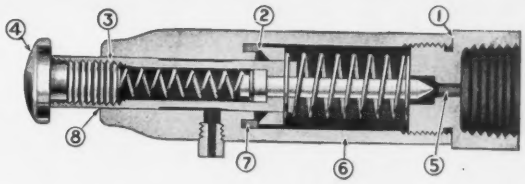
A REMOVABLE HEAD DRUM

A Trageser removable head drum is the ideal container for any of your bulk paste products—auto soaps, soft soap bases, polishes, textile specialties, fats, greases, etc. The head comes off quickly and makes the container easy to handle.

Trageser drums are built to last. Send for new low prices on 30, 55 and 110 gallon sizes.

JOHN TRAGESER STEAM COPPER WORKS
Grand Avenue. Maspeth, L. I., N. Y.
PUlaski 5—7700

PALMER SOAP VALVES



All parts of Palmer Valve Units are replaceable—for repairs or cleaning—all screwed together—no special tools needed. Palmer valves give long service—withstand highest pressures—conserve soap—prevent wasteful continuous flow of soap when valves are being operated. Equipped with automatic shut-off (optional) which permits valve removal for cleaning or repairs, yet automatically prevents flow of soap at unit without interfering with other valves on system. Study construction above.

Palmer PRODUCTS INC
WAUKESHA, WIS.
Adjacent to Milwaukee

We manufacture a complete line of janitor and sanitary supplies, including soap dispensing equipment of all kinds. Write for complete literature.

Modern Soap Perfumes

by Frank H. Sedgwick

Practical handbook on the science of soap perfumery. The author lays down the general principles which apply, and also offers a number of novel and useful suggestions on compounding. His experience in soap perfumery has been extensive in the British soap trade.

Priced, post free, at $1.00 per copy. Send check with order.

American Agents

MAC NAIR-DORLAND CO.

136 Liberty St. New York City

IF YOU SELL

VITOZONE

PROCESS

DEODORANTS

—YOU'LL SELL MORE!

Exclusive new perfuming process of PURE PARA—dichlorobenzene under pressure up to EIGHTY TONS produces the VITOZONE DEODORANT BLOCKS.

MORE CONCENTRATED
MORE EFFICIENT
MORE ECONOMICAL

Write for Sample, Odors, Sizes and Price for packaging under

YOUR OWN LABEL

FULD BROS. Inc
2310 Frederick Ave., Baltimore, Md.

Sanitary Chemicals
For Jobbing Trade

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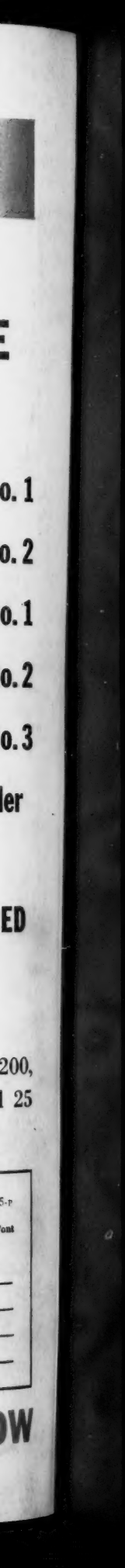
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